



U.S. DEPARTMENT OF THE INTERIOR

AC
BUREAU OF
LAND MANAGEMENT

WILDERNESS

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

WHITE RIVER RESOURCE AREA
COLORADO

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1982
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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

COLORADO STATE OFFICE

1037 20th STREET

DENVER, CO 80202

NOTICE

This is the Draft Environmental Impact Statement (DEIS) for the White River Resource Area Wilderness Planning Amendment. Your review and comments on the DEIS are invited. Please direct your written comments to the Wilderness Team Leader, BLM, White River Resource Area, PO Box 928, Meeker, Colorado 81641. Also use this address when requesting further information on materials referenced in the DEIS.

Public hearings on the DEIS will be held as follows:

Tuesday, December 7, 1982	Meeker	Fairfield Center 200 Main Street 7:00 P.M.
Wednesday, December 8, 1982	Vernal	7th Circuit Court Uintah County Courthouse Main Street 7:00 P.M.
Tuesday, December 14, 1982	Grand Junction	Ramada Inn 718 Horizon Drive 7:00 P.M.
Wednesday, December 15, 1982	Denver	Ramada Inn Foothills 11595 W. 6th Ave. 2:00 P.M.

Written comments received by February 7, 1983 and testimony presented at the public hearings will be fully considered and evaluated in preparation of the Final Environmental Impact Statement (FEIS). Those comments that pertain to the adequacy of the impact assessment, or present new data, will be addressed in the FEIS. Comments received after the close of the 90-day comment period will be taken into consideration in the subsequent decision-making process, although they may arrive too late for formal inclusion in the FEIS.

If changes in the FEIS in response to comments are minor, the FEIS will include only those changes and will not be a reprint of the entire DEIS. For this reason, reviewers are requested to retain their copy of the DEIS for use in conjunction with the FEIS volume.

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ENVIRONMENTAL IMPACT STATEMENT

for the

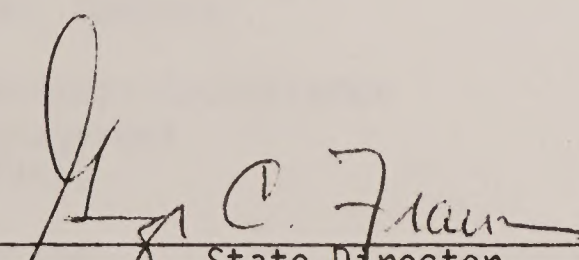
WHITE RIVER RESOURCE AREA

WILDERNESS PLANNING AMENDMENT

Prepared by

BUREAU OF LAND MANAGEMENT

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ENVIRONMENTAL IMPACT STATEMENT

for the

WHITE RIVER RESOURCE AREA

WILDERNESS PLANNING AMENDMENT

Draft (X) Final ()

The U.S. Department of the Interior, Bureau of Land Management

1). **Type of Action:** Administrative () Legislative (X)

2). **Abstract:** This environmental impact statement amends the White River Resource Area Management Framework Plan for wilderness. Three alternatives: All Wilderness, No Wilderness (No Action), and Boundary Adjustment (Partial Wilderness) were considered for six wilderness study areas in the White River Resource Area, Craig District of Colorado. The study areas include: Bull Canyon (12,297 acres), Willow Creek (13,368 acres), Skull Creek (13,740 acres), Black Mountain (9,932 acres), Windy Gulch (12,274 acres), and Oil Spring Mountain (17,740 acres). This analysis studied the environmental and socioeconomic effects of designating or not designating each area as wilderness. The Bull Canyon WSA, only, is addressed under the Boundary Adjustment alternative. The preferred alternative, which was recommended after the environmental analysis, was to recommend part of the Bull Canyon WSA (11,690 acres) as suitable for wilderness designation and to recommend the other five WSAs as not suitable for designation.

3). **Comments** have been requested from the following: See distribution list

4). **For further information, contact:**

Dave Cooper, Wilderness Coordinator
Bureau of Land Management
Craig District Office
PO Box 248
Craig, Colorado 81626
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5). **Comments on the DEIS must be received no later than:**

February 7, 1983

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SUMMARY

SUMMARY

MAJOR IMPACTS OF THE ALTERNATIVES ANALYZED

All Wilderness Alternative

One of the major impacts of the All Wilderness Alternative is the loss of timber resources. This alternative would result in the loss of approximately 100,000 acres of timberland. The loss of timberland would result in a significant reduction in the timber supply. This would result in a significant increase in the cost of timber. The loss of timberland would also result in a significant reduction in the timber industry's ability to meet the demand for timber. This would result in a significant increase in the cost of timber. The loss of timberland would also result in a significant reduction in the timber industry's ability to meet the demand for timber. This would result in a significant increase in the cost of timber.

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ALTERNATIVES

There are three alternatives being analyzed in this study. The first alternative is the All Wilderness Alternative. The second alternative is the Selective Logging Alternative. The third alternative is the No Action Alternative.

The All Wilderness Alternative would result in the loss of approximately 100,000 acres of timberland. The Selective Logging Alternative would result in the loss of approximately 50,000 acres of timberland. The No Action Alternative would result in the loss of approximately 25,000 acres of timberland.

The loss of timberland would result in a significant reduction in the timber supply. This would result in a significant increase in the cost of timber. The loss of timberland would also result in a significant reduction in the timber industry's ability to meet the demand for timber. This would result in a significant increase in the cost of timber. The loss of timberland would also result in a significant reduction in the timber industry's ability to meet the demand for timber. This would result in a significant increase in the cost of timber.

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SUMMARY

Six wilderness study areas (WSAs) have been identified on public land administered by the Bureau of Land Management, Craig District, White River Resource Area in northwestern Colorado. These areas, totaling 79,351 acres, were identified during the inventory phase of the BLM's wilderness review process and are analyzed in this document to determine their suitability for inclusion in the National Wilderness Preservation System (see Map S-1 for location of WSAs).

This environmental impact statement (EIS) analyzes the environmental and socioeconomic impacts of recommending all or part of each of the six WSAs as suitable or not suitable for wilderness designation. All recommendations in this draft document are preliminary and subject to administrative review prior to their submission through the Secretary of the Interior and the President to Congress. Only Congress can designate an area as wilderness.

ALTERNATIVES

Three alternatives were examined or considered for each WSA:

- 1) All Wilderness Alternative - Discusses the impacts to environmental and socioeconomic values if the area was designated as wilderness.
- 2) No Wilderness (No Action) Alternative - Discusses the impacts to environmental and socioeconomic values if the area was not designated as wilderness. If not recommended for designation, the area would be determined to be more suitable for other uses and would be managed for multiple-resource values.
- 3) Boundary Adjustment (Partial Wilderness) Alternative - Partial wilderness was

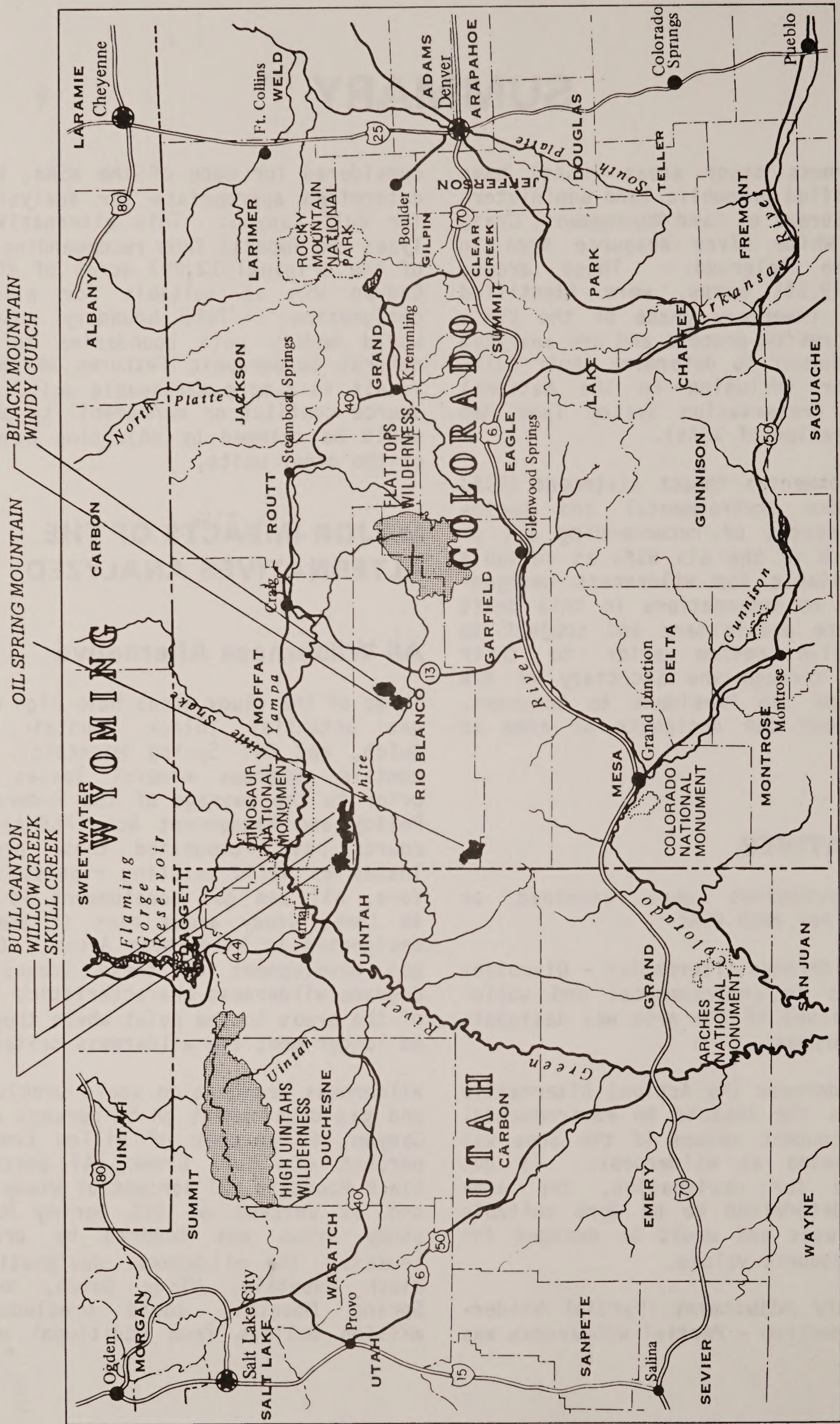
considered for each of the WSAs, but was determined appropriate for analysis only for Bull Canyon. This alternative analyzes the impacts from recommending 11,690 of the original 12,297 acres of the Bull Canyon WSA as suitable for wilderness designation. This boundary adjustment would modify unit boundaries to follow natural topographic features which would result in a more manageable unit. No resource conflict or manageability problems would be changed by adjusting boundaries on the other units.

MAJOR IMPACTS OF THE ALTERNATIVES ANALYZED

All Wilderness Alternative

Three of the study areas have high oil and gas potential (Black Mountain, Windy Gulch, and Oil Spring Mountain). They contain numerous mineral leases issued prior to the passage of the Federal Land Policy and Management Act (FLPMA). The courts have recognized these pre-FLPMA leases as valid existing rights. Therefore, oil and gas development is likely in these study areas even if they were designated as Wilderness Areas. Oil and gas development on these leases would degrade wilderness characteristics in each of the areas to the point where they would no longer meet the wilderness criteria.

Wilderness designation would preclude oil and gas development on 58 percent of Bull Canyon, 67 percent of Willow Creek, 75 percent of Skull Creek, 47 percent of Black Mountain, 27 percent of Windy Gulch, and 31 percent of Oil Spring Mountain study areas not covered by pre-FLPMA leases. The wilderness designation for Black Mountain, Windy Gulch, and Oil Spring Mountain could preclude 10.7 million dollars from additional oil and



Map S-1 - Location Map

gas development on post-FLPMA leases. Loss of revenues from nondevelopment of post-FLPMA leases on Bull Canyon, Willow Creek and Skull Creek study areas is not significant. Low monetary value would be attributed to these areas due to the low development potential.

No Wilderness (No Action) Alternative

Nondesignation is not expected to adversely impact either the Skull Creek or Willow Creek WSA since the existing Management Framework Plan recommends a multiple-use, site specific study to manage the Skull Creek Basin with emphasis on the recreation, cultural and historic values in the area. Even though these WSAs have the mandatory wilderness characteristics, they were found to be unmanageable as wilderness due to the configuration of the boundaries. With no conflicting resource uses existing in these areas, no significant effects to wilderness characteristics from this alternative are expected to occur.

Nondesignation of the Bull Canyon WSA could have an adverse impact to the wilderness characteristics in the study area. At the present time, little development is planned. However, if development is proposed in the future, it would take priority over the protection of wilderness characteristics with this alternative.

The development anticipated in Black Mountain, Windy Gulch, and Oil Spring Mountain from oil and gas development under the No Wilderness alternative would adversely affect the habitat for approximately 330 more deer than the wilderness designation alternatives.

No significant adverse socioeconomic or environmental consequences would result from this alternative to existing or planned uses of these lands. This is because the additional oil and gas development

would only be a continuation of current activity in the region.

Boundary Adjustment (Partial Wilderness) Alternative

The consequences of recommending Bull Canyon as suitable for designation as wilderness under the Wilderness Boundary Adjustment alternative would be beneficial. The National Wilderness Preservation System would gain 11,690 additional acres of high country desert with unique historic and scientific values, and the general public would benefit by being assured that these public lands were being administered for their best use. Providing additional, suitable wilderness for public use during a period when national wilderness use is increasing from 8 to 12 percent per year is considered beneficial.

Approximately 607 acres of Bull Canyon, that were part of the original study area boundary, are recommended to be managed under the existing land use plan. The overall effects to the management of the Bull Canyon unit, by adjusting the boundary to follow the topography where possible, would be beneficial for management as wilderness.

Approximately 607 acres of Bull Canyon, that were part of the original study area boundary, are recommended to be managed under existing land use plans.

The overall effects to the management of the Bull Canyon unit, by adjusting the boundary to follow the topography where possible, would be beneficial for management as wilderness. Boundaries which follow recognizable topographic features would make the study area easier to identify by the public. By making the boundaries easier to locate on the ground, inadvertent intrusions which would not be compatible with wilderness characteristics would be less likely to occur.

SUMMARY

PREFERRED ALTERNATIVE

The following table summarizes the acres recommended as suitable and not suitable for wilderness designation. The preferred alternative for each WSA is shown in parenthesis.

WSA	Acres Suitable For Designation	Acres Not Suitable For Designation
Bull Canyon (CO-0100-001/ UT-080-419)	11,690 (Boundary Adjustment Alternative)	607
Willow Creek (CO-010-002)	0 (No Wilderness)	13,368
Skull Creek (CO-010-003)	0 (No Wilderness)	13,740
Black Mtn. (CO-010-007A)	0 (No Wilderness)	9,932
Windy Gulch (CO-010-007C)	0 (No Wilderness)	12,274
Oil Spg. Mtn. (CO-010-046)	0 (No Wilderness)	17,740
Total	11,690 acres	67,661 acres

The preferred alternative is to recommend part (11,690 acres) of the Bull Canyon WSA as suitable for wilderness designation and to recommend five WSAs (Willow Creek, Skull Creek, Black Mountain, Windy Gulch and Oil Spring Mountain) as unsuitable for wilderness designation.

SCOPING PROCESS

Scoping meetings were held in Denver, Grand Junction, Rangely and Meeker, Colorado for the purpose of identifying issues and concerns regarding the wilderness study process. These meetings also covered the scoping process for proposed oil shale and coal development not related to the wilderness process.

CHAPTER I

PURPOSE AND NEED FOR ACTION

INTRODUCTION

The Federal land policy and management system (FLPMA) of 1976 requires the Secretary of the Interior to review and assess the land resources of the United States, and to report to the President and Congress on the results of the review. The Secretary is required to submit a report to the President by October 1, 1977, and to the Congress by December 1, 1977. The report to the President is to be in the form of a memorandum, and the report to the Congress is to be in the form of a report.

Under FLPMA, the Secretary is required to conduct a review of the land resources of the United States, and to report to the President and Congress on the results of the review. The review is to be conducted in accordance with the requirements of FLPMA, and the report is to be submitted to the President and Congress by the specified dates.

The Department of the Interior has initiated a review of the land resources of the United States, and has appointed a committee to conduct the review. The committee is to be composed of representatives of the various departments and agencies of the Department of the Interior, and is to be headed by the Assistant Secretary for Land Management.

LOCATION

The review of the land resources of the United States is being conducted in accordance with the requirements of FLPMA, and the results of the review are being reported to the President and Congress. The review is being conducted in a systematic and thorough manner, and the results are being reported in a clear and concise manner.

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BUSINESS REVIEW PROCESS

The review of the land resources of the United States is being conducted in accordance with the requirements of FLPMA, and the results of the review are being reported to the President and Congress. The review is being conducted in a systematic and thorough manner, and the results are being reported in a clear and concise manner.

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PREFERRED ALTERNATIVE

The following table summarizes the costs recommended for various alternatives for various categories. The costs are presented in thousands of dollars.

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CHAPTER 1

SCOPE AND PURPOSE

This chapter describes the scope and purpose of the study. It outlines the objectives of the study and the methods used to collect and analyze data. The chapter also discusses the limitations of the study and the implications of the findings.

PURPOSE AND NEED FOR ACTION

Category	Alternative 1	Alternative 2	Alternative 3
Construction	100	150	200
Operation	50	75	100
Maintenance	25	35	50
Replacement	15	20	30
Disposal	10	15	20
Other	5	10	15
Total	205	295	395

CHAPTER I

PURPOSE AND NEED FOR ACTION

INTRODUCTION

The Federal Land Policy and Management Act (FLPMA) of 1976 requires the Secretary of the Interior to review areas of the public lands determined to have wilderness characteristics, and to report to the President his recommendations as to the suitability of each such area for preservation as wilderness. The Secretary is required to report his recommendations to the President by October 21, 1991, and the President is required to report his recommendations to Congress by October 21, 1993. During the period of this review and until Congress acts on the President's recommendations, the Secretary is required to manage such lands so as not to impair their suitability for preservation as wilderness subject to certain exceptions and conditions.

Under FLPMA, wilderness preservation is part of BLM's multiple use mandate, and wilderness values are recognized as part of the spectrum of resource values and uses to be considered in the resource management planning process.

This Environmental Impact Statement (EIS) is an amendment to the White River Resource Area Management Framework Plan (MFP). The analysis and recommendations made in this EIS update the data in the MFP which was completed in February 1981.

LOCATION

Six Wilderness Study Areas (WSAs) are located in the White River Resource Area, Craig District, in northwestern Colorado. One wilderness study area, Bull Canyon, has an additional 520 acres located in the Bookcliffs Resource Area, Vernal District, Utah (see Maps 1-1 through 1-6 for WSA locations).

Three of the areas, Black Mountain, Windy Gulch and Oil Spring Mountain are located in Rio Blanco County, Colorado. The other three areas, Bull Canyon, Willow Creek and Skull Creek are located in Moffat County, Colorado except for the 520 acres in Bull Canyon located in Uintah County, Utah.

WILDERNESS REVIEW PROCESS

To carry out the wilderness mandate of Section 603 of FLPMA, the Bureau of Land Management has developed a wilderness review process containing the following three phases:

Inventory

This phase involved examining the public lands to determine and locate the existence of areas containing wilderness characteristics that meet the criteria established by Congress. Such areas are identified as wilderness study areas.

The inventory phase of the process was completed for the White River Resource Area WSAs in November 1980. There were 79,351 acres found to contain wilderness characteristics which were identified as wilderness study areas.

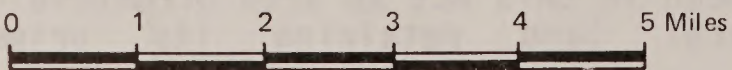
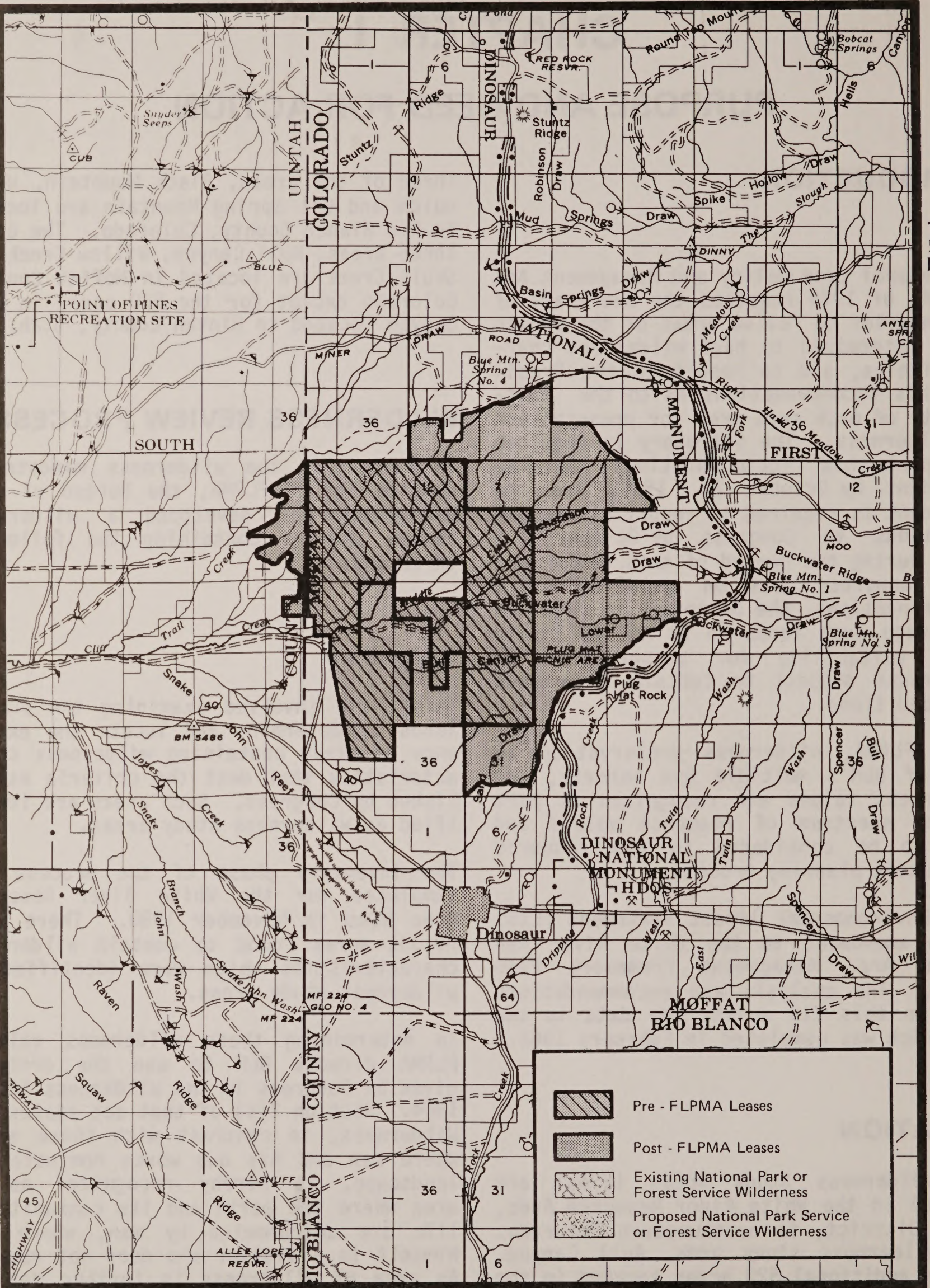
In determining these wilderness values, FLPMA directs BLM to use the criteria given by Congress in the Wilderness Act of 1964. Section 2(c) of that act states: "A Wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval

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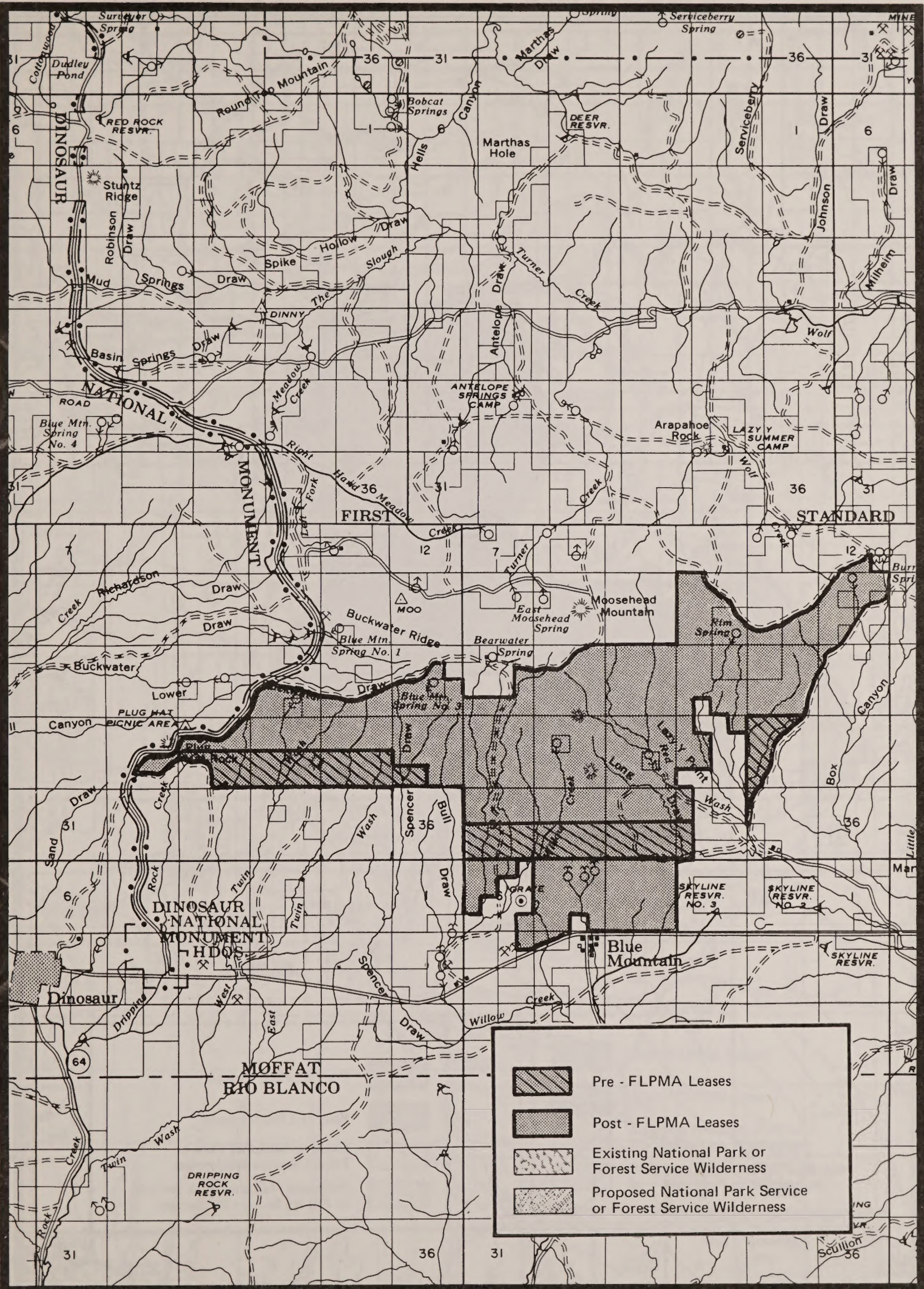
Map 1-1 - Bull Canyon

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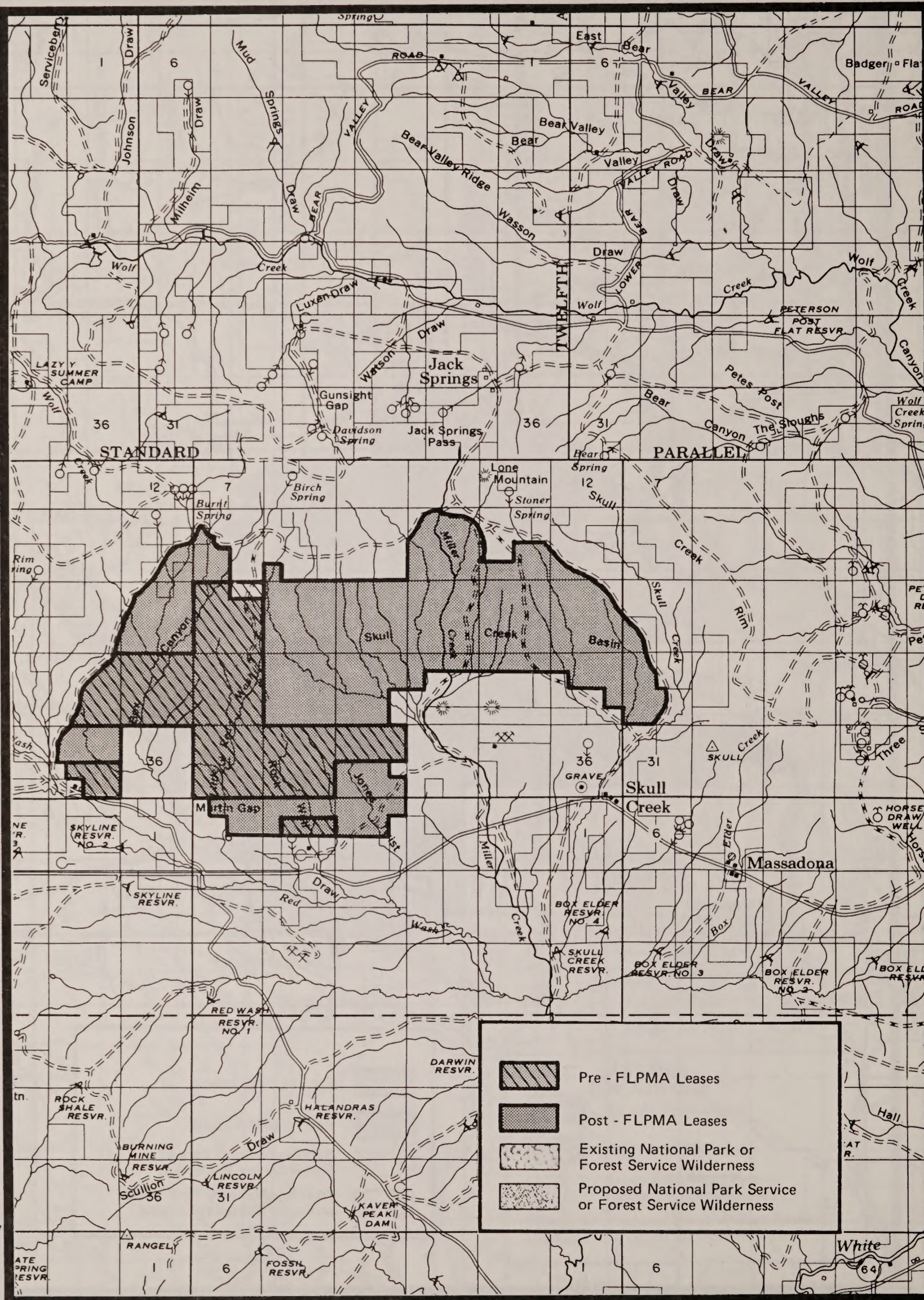
Map 1-2 - Willow Creek

CRAIG

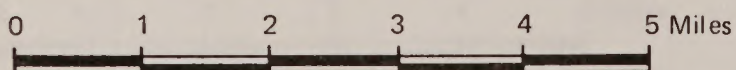
T 5 N

T 4 N

T 3 N



	Pre - FLPMA Leases
	Post - FLPMA Leases
	Existing National Park or Forest Service Wilderness
	Proposed National Park Service or Forest Service Wilderness



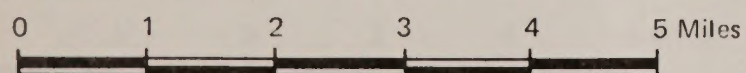
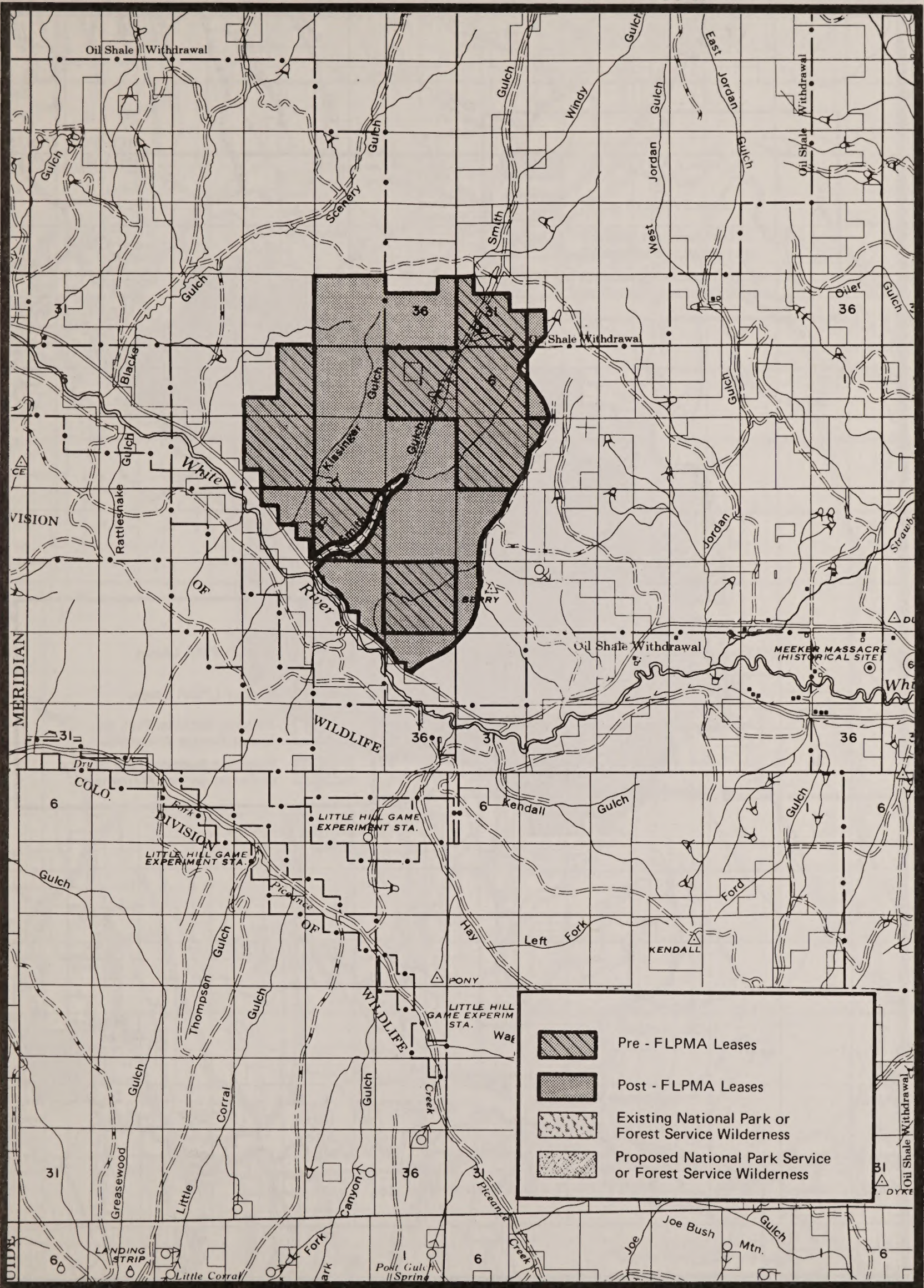
Map 1-3 - Skull Creek

CRAIG

T 2 N

T 1 N

T 1 S



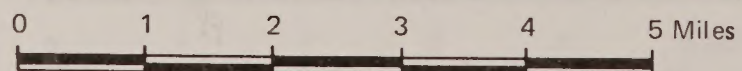
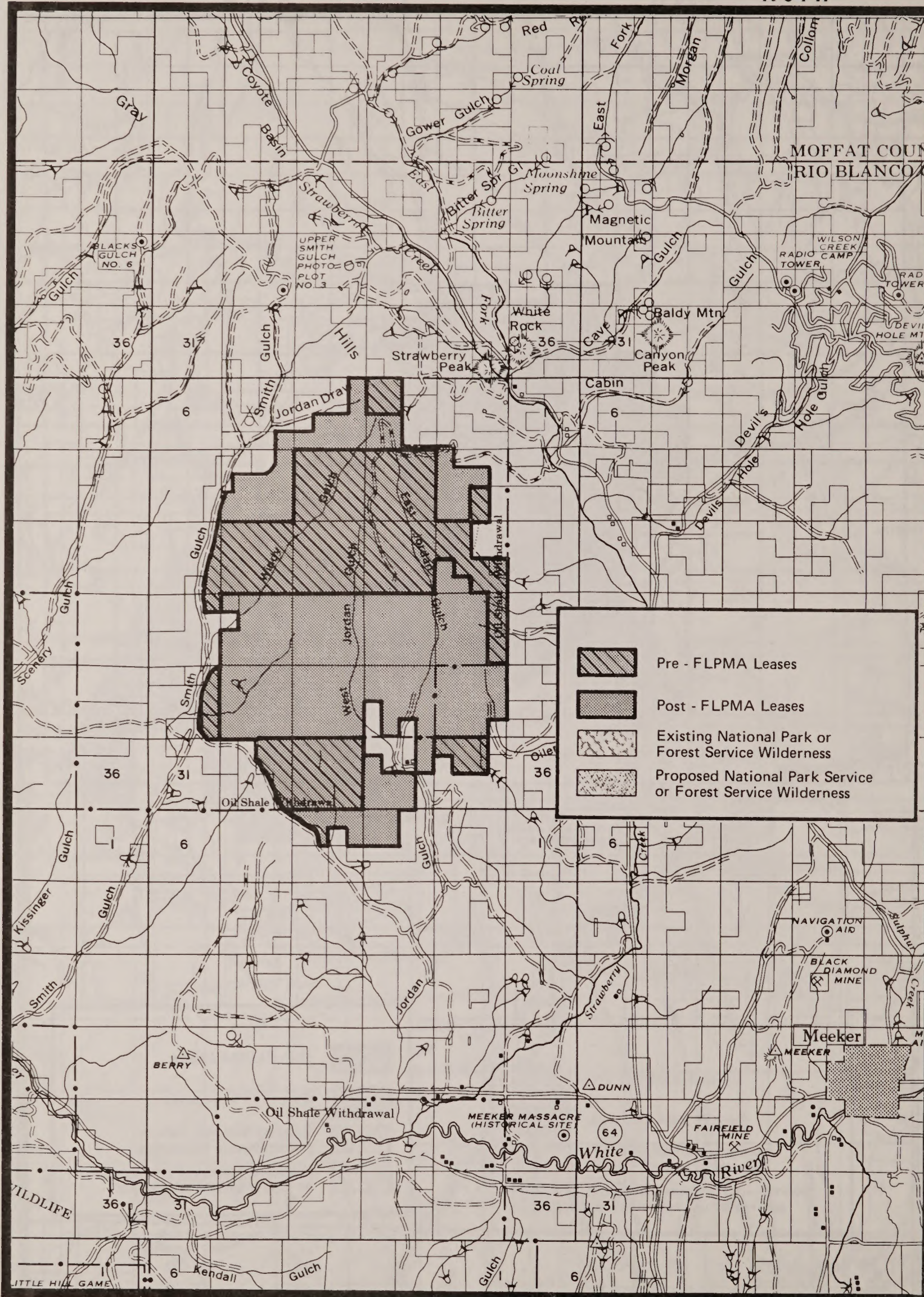
Map 1-4 - Black Mountain

CRAIG

T 3 N

T 2 N

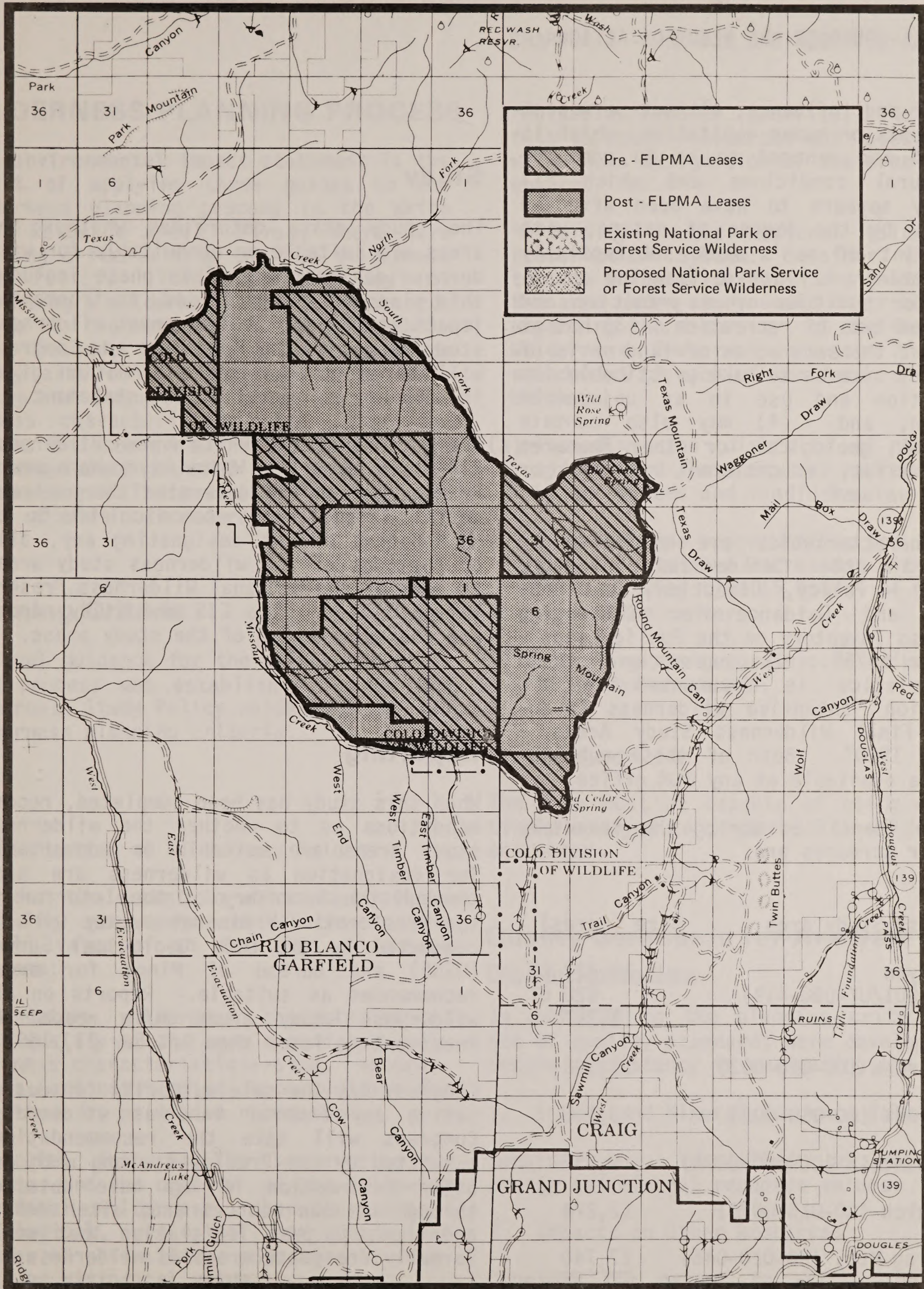
T 1 N



Map 1-5 - Windy Gulch

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12



T 3 S

T 4 S

Map 1-6 - Oil Spring Mountain

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character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunity for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value."

These characteristics are explained in detail in the "Wilderness Inventory Handbook - Policy, Direction, and Procedures and Guidance for Conducting Wilderness Inventory on the Public Lands - September 1978". The presence of these characteristics is documented in the publication "Intensive Wilderness Inventory - Final Wilderness Study Areas - November 1980". Both of these publications are available at any BLM office.

The WSAs identified during the inventory and their acreages are:

<u>Wilderness Study Area</u>	<u>Size (Acres)</u>
Bull Canyon (CO-010-001/UT-080-419)	11,777 CO 520 UT <u>12,297</u>
Willow Creek (CO-010-002)	13,368
Skull Creek (CO-010-003)	13,740
Black Mountain (CO-010-007A)	9,932
Windy Gulch (CO-010-007C)	12,274
Oil Spring Mtn. (CO-010-046)	<u>17,740</u>
Total Acres	79,351

Study

The study phase determines whether the areas are suitable or unsuitable for wilderness designation. This phase includes this planning amendment and environmental impact statement. A subsequent wilderness study report to the President and Congress will be based upon the information given in this environmental impact statement.

The purpose of the White River Wilderness EIS is to amend the White River Management Framework Plan and determine the environmental, social and economic effects of designating or not designating any, all, or portions of the wilderness study areas as part of the National Wilderness Preservation System. The EIS and study report are the culmination of the study phase.

Reporting

When this study has been completed, recommendations as to whether the wilderness study areas are suitable or unsuitable for designation as wilderness are made through the Secretary of the Interior to the President. A mineral survey will be conducted by the U.S. Geological Survey (USGS) and Bureau of Mines for areas recommended as suitable. Reports on all wilderness study areas must reach the President no later than October 21, 1991.

Congress has the sole authority for designating any Federal land as wilderness. Congress will take the recommendations submitted by the President along with any other information it may have obtained through its own sources and, after debate and counsel, pass legislation that would formally designate areas as wilderness.

WILDERNESS PLANNING PROCESS

This environmental impact statement is the result of applying three guides to the wilderness planning process in the White River Resource Area. First, there were planning criteria from the BLM Wilderness Study Policy. These described ways of evaluating a wilderness study area according to its characteristics and manageability. Second, the same wilderness study policy also contained standards for analyzing and comparing a study area's wilderness characteristics with other resources and concerns. Third, there were planning issues gathered from public scoping meetings. These were the special concerns of the local and regional public.

Planning Criteria

National guidance for the wilderness planning process was established in the BLM Wilderness Study Policy which included two wilderness planning criteria:

1. Evaluation of Wilderness Values

Consider the extent to which each of the following components contributes to the overall value of an area for wilderness purposes:

*Mandatory wilderness characteristics: The quality of the area's mandatory wilderness characteristics--size, naturalness, and outstanding opportunities for solitude or primitive recreation.

*Special features: The presence or absence, and the quality of the following optional wilderness characteristics--ecological, geological, or other features of scientific, educational, scenic, or historical value.

*Multiple resource benefits: The benefits to other resources and uses which wilderness designation of the area could ensure.

*Diversity in the National Wilderness Preservation System: Consider the extent to which wilderness designation of the area under study would contribute to expanding the diversity of the National Wilderness Preservation System from the standpoint of each of the factors listed below:

- (a) Expanding the diversity of natural systems and features, as represented by ecosystems and landforms.
- (b) Expanding the opportunities for solitude or primitive recreation within a day's driving time (5 hours) of major population centers.
- (c) Balancing the geographic distribution of wilderness areas.

2. Manageability

The area must be capable of being effectively managed to preserve its wilderness character.

Quality Standards for Analysis and Documentation

In addition to the planning criteria, a set of quality standards were developed to ensure consistency in evaluating the WSAs.

1. Energy and Mineral Resource Values

Consider any identified or potential energy and mineral resource values.

2. Impacts on Other Resources

Consider the extent to which other resource values or uses of the area would

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be foregone to adversely affected as a result of wilderness designation.

3. Impact of Nondesignation on Wilderness Values

Consider the alternative use of land under study if the area is not designated as wilderness, and the extent to which the wilderness values of the area would be foregone or adversely affected as a result of this use.

4. Public Comment

Consider comments received from interested and affected publics at all levels.

5. Local Social and Economic Effects

Give special attention to adverse or favorable social and economic effects which designation of the area would have on local areas.

6. Consistency with Other Plans

Consider consistency with officially approved and adopted resource-related plans of other Federal agencies, State and local governments, and Indian tribes.

Issues and Concerns (Public Scoping)

Scoping meetings were held in Rangely, Denver, Grand Junction, and Meeker, Colorado for the purpose of identifying issues and concerns regarding the wilderness study process. These meetings also covered the scoping process for proposed oil shale and coal development not related to the wilderness process.

One meeting was held in Rangely at Colorado Northwestern Community College on February 26, 1981. Two meetings were held in Denver; one at the old Federal building, downtown, and another at the Ramada Inn Foothills. Both were on March 3, 1981. The meeting at Grand Junction was held at

the District BLM Office, on March 4, 1981. On March 5, 1981 a meeting was held at the Fairfield Center in Meeker.

The following issues were identified:

(1) Wilderness designation would conflict with other national goals such as energy self-sufficiency.

(2) The final decision for wilderness designations would conflict with state and local land use plans and policies.

(3) The BLM must consider not only present uses but also future potential uses that may be prevented by wilderness designation.

(4) The cumulative impacts on all other resources resulting from designation as wilderness should be analyzed.

(5) A study area's mineral potential must be assessed adequately despite the apparent difficulty.

(6) The Windy Gulch study area should be designated wilderness for protection of critical elk habitat.

(7) More wilderness areas will be needed to compensate for the region's population growth.

(8) Willow Creek study area should be designated wilderness for the protection of water, geological structures, historical resources, plus it would act as a buffer for Dinosaur National Monument.

(9) There is a need for a buffer zone for the Black Mountain study area.

(10) Wilderness designation would eliminate off-road vehicle use opportunities in the study areas.

(11) Wilderness designations are necessary to protect cultural resources.

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(12) Wilderness designation would limit development in surrounding private areas and preempt local land use decisions. Local activity would not be allowed if it would deteriorate the air quality in the wilderness. Pipeline and utilities would have to be expensively routed around the areas, as would transportation corridors for the movement of coal, oil, and shale. Even local ranch economy would be impacted.

(13) The Skull Creek Basin must be designated as wilderness, or if not wilderness then some other special designation that would guarantee the protection of the resources there such as the mule deer habitat and the archaeological sites.

(14) All parties involved, from the Bureau of Land Management to Congress, must make objective decisions about wilderness and not be swayed by special interest pressure or popular political sentiment of the moment.

RELATIONSHIP TO OTHER DOCUMENTS

This EIS is being prepared within the context of the BLM wilderness inventory, completed in 1980, and the White River MFP, completed in 1981. The associated documents that relate to this EIS are described below and are referenced in the text.

Wilderness Inventory Handbook - September 27, 1978 - U.S. Department of the Interior, Bureau of Land Management. This handbook contains the policy, direction, procedures, and guidance for conducting wilderness inventory on the public lands.

Interim Management Policy and Guidelines for Lands Under Wilderness Review - December 12, 1979 - U.S. Department of the

Interior, Bureau of Land Management. The Interim Management Policy describes the temporary management of wilderness study areas and applies only during the time an area is under wilderness review and until Congress acts on wilderness study areas.

BLM: Initial Wilderness Inventory - Final - August 1979 - In this report, public lands administered by the BLM which clearly and obviously do not have wilderness characteristics are identified. Existing information, such as maps and aerial photos, and input received from the public were utilized to make this decision. Three criteria had to be met during this stage for an area to be recommended for intensive inventory. Each area had to be: (1) at least 5,000 acres in size or contiguous to a proposed or existing wilderness area, (2) roadless, and (3) substantially free of man's imprints.

BLM: Intensive Wilderness Inventory - Proposed Wilderness Study Areas - February 1980 - This report documents the intensive inventory. In this stage, field surveys were conducted, and areas were examined for wilderness qualities listed in the Wilderness Act: opportunities for solitude or primitive and unconfined recreation, naturalness, and the presence of supplemental values. Areas having these characteristics were identified as proposed Wilderness Study Areas (WSAs).

BLM: Intensive Wilderness Inventory - Final Wilderness Study Areas - November 1980 - This document contains the same information as the Proposed Wilderness Study Areas report, except this document includes a thorough analysis and evaluation of public comments and any changes to the WSA recommendations made as a result of public comment. This document represents the completion of the wilderness inventory.

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White River Resource Area Management Framework Plan

The Management Framework Plan (MFP) is the land use master plan that identifies the management priorities of the public lands. The MFP was completed in February 1981. All of the wilderness related documents are available for review at any BLM office. The White River MFP can be reviewed at the BLM office in Meeker.

CHAPTER II

DESCRIPTION OF THE ALTERNATIVES

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DESCRIPTION OF THE ALTERNATIVES

GENERAL DESCRIPTION

Three alternatives are considered in this document. They are: All Wilderness; No Wilderness (No Action); and Boundary Adjustment (Partial Wilderness). The All Wilderness and No Wilderness alternatives are examined for all six WSAs. The Boundary Adjustment alternative is studied for Bull Canyon only. The purpose of the Boundary Adjustment alternative is to modify the original boundary of the Bull Canyon WSA to more closely follow topographic features. This adjustment would make the unit more manageable and makes the area more appropriate for wilderness designation under the Boundary Adjustment alternative than under the All Wilderness alternative.

In Bureau initiated actions, such as wilderness studies, the "proposed action" and the agency's "preferred alternative" are the same. For the sake of consistency and ease of understanding, the term "preferred alternative" will be used throughout the EIS. These preliminary recommendations are subject to administrative review prior to being formally submitted by the Secretary of the Interior to the President and then to Congress.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM ANALYSIS

Combination Alternative

Consideration was given to combining certain study areas. Areas that lie adjacent to one another include: Bull Canyon, Wil-

low Creek and Skull Creek in one group, Black Mountain and Windy Gulch in another.

The Bull Canyon and Willow Creek combination was considered but eliminated because of a 500 foot wide withdrawal that separates them. The withdrawal is for the Dinosaur National Monument paved access road which connects the headquarters building to the canyonlands portion of the monument. A Willow Creek and Skull Creek combination was considered but eliminated because of BLM Road #1538 which separates them.

A Black Mountain/Windy Gulch combination was considered but eliminated for two reasons. First, the public land connecting the two units, which is less than a half-mile wide, also contains a 4 and a 6 inch buried gas pipeline. The right-of-way is held by Western Slope Gas Company. Second, these two areas have a well defined physical separation and Western Slope's maintenance rights would interfere with management.

Expansion Alternative

The possibility of expanding the Skull Creek study area was also considered. The Skull Creek WSA lies in the eastern portion of the 58,626 acre Skull Creek Environmental Study Area. This Environmental Study Area was first identified in 1975 and is currently being managed to protect the cultural and historical resources within it. The idea of expanding the WSA boundary to include the environmental study area lands was considered but eliminated because it would be an arbitrary extension onto lands without wilderness characteristics and would be inconsistent with the wilderness review process. More importantly, it would involve large tracts of private and state land.

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Boundary Adjustment Alternative for all Other WSAs with the Exception of Bull Canyon

The Black Mountain WSA was assessed for boundary adjustments to eliminate any resource conflicts or make the unit more manageable. While no oil and gas development is currently taking place within the area, it is surrounded on the east and west by producing gas fields. The area itself has been assessed as having a moderate to high potential for oil and gas reserves. Fifty-three percent of the WSA lands are covered with valid existing mineral development rights. Since the entire area is rated as a moderate to high development potential and also because the majority of the lands are covered with valid existing development rights, no manageable partial area could be identified.

Seventy-three percent of the Windy Gulch WSA and 67 percent of the Oil Spring Mountain WSA are covered with valid existing mineral development rights. No manageable partial areas could be identified as suitable for wilderness designation.

Both the Willow Creek and Skull Creek WSAs were assessed for boundary adjustments to eliminate the unwieldy original inventory boundary that follows legal section lines. However, the most obvious topographic features lie considerably outside the units' boundaries.

ALTERNATIVES CONSIDERED

All Wilderness Alternative

This alternative analyzes the effect of wilderness management, as detailed in the "Wilderness Management Policy, U.S. De-

partment of the Interior, Bureau of Land Management, September 1981". Basically, management would be according to the provisions of the 1964 Wilderness Act, which states that wilderness areas shall be devoted to the public purposes of recreation, scenic, scientific, educational, conservation, and historical use. Any area chosen for management under this alternative is a recommendation to Congress that the area is suitable for designation as wilderness. Again, this recommendation is subject to administrative review before being forwarded to the President and to Congress.

No Wilderness (No Action) Alternative

Under this alternative, management of the study area(s) would continue as prescribed by the existing land use plan, the White River Resource Area Management Framework Plan (MFP). Any area chosen for management under this alternative is a recommendation that the area is unsuitable for designation as wilderness.

Based on the MFP, the areas, if not designated as wilderness, would be managed for multiple use with emphasis on the following values or uses:

Bull Canyon: Dispersed recreation and cultural resources

Willow Creek: Dispersed recreation, cultural, paleontological and historic resources.

Skull Creek: Dispersed recreation, cultural, paleontological and historic resources.

Black Mountain: Range management (livestock and wildlife), oil and gas, and wood products.

Windy Gulch: Range management (livestock and wildlife), oil and gas, and wood products.

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Oil Spring Mountain: Range management (livestock and wildlife) and oil and gas.

Multiple-use management of the areas would be subject to normal environmental protections as required by law.

Boundary Adjustment (Partial Wilderness) Alternative (Bull Canyon Only)

This alternative would adjust Bull Canyon's boundary to enhance the area's manageability by eliminating some 742 acres in Colorado from the original WSA boundary and adding some 135 acres in Utah that had been identified in the intensive inventory but dropped in the final WSA decision.

For a WSA to be "manageable" BLM must be reasonably certain that the entire area can be managed as wilderness over the long term. This determination is based on present knowledge of the resources, potential visitor uses, nonconforming uses and the potential impact of these activities on preservation of an area's wilderness character. Manageability was not a factor considered during the inventory phase when the original WSA boundaries were drawn.

The proposed boundary adjustments include modifying the western border to follow the topographic features of the hogback and the east fork of Trail Creek. In addition, the southern boundary was withdrawn approximately 3/4 mile to eliminate a potential conflict with vehicle use of the trails and ways.

When defining manageable boundaries it is desirable to use easily identifiable topographic features rather than arbitrary administrative boundaries (e.g. section lines). Thus, minor boundary changes have been proposed for the Bull Canyon unit.

Boundaries which follow recognizable topographic features would make the study area easier to identify by the public. By mak-

ing the boundaries easier to locate on the ground, inadvertent intrusions which would not be compatible with wilderness characteristics would be less likely to occur.

In addition, two corrections of mistakes in the original study area boundary were made during this study. One change was the inclusion of approximately 65 acres of lands formerly thought to include private mineral rights, located in T5N, R103W, Section 31. The other change involved the exclusion of the Dinosaur National Monument Access road withdrawal. Formerly, only 200 feet was excluded when 500 feet was correct.

Acreage changes for the Bull Canyon WSA are as follows:

	<u>Original Study Area</u>	<u>Boundary Adjustment Alternative</u>
Colorado	11,777 acres	11,035 acres
Utah	520 acres	655 acres
Total	12,297 acres	11,690 acres

This alternative also identified portions of three state school trust lands and some additional BLM lands that are within the topographic boundaries of the area and would enhance the area's manageability. These potential additions are outside the scope of the EIS's responsibility for recommendation, so are only identified for information purposes. Inclusion of State lands would require negotiations with the State Land Board and would only be initiated should Congress designate the Federal lands as wilderness.

Potential additions are:

<u>State School Trust Lands</u>	
T5N, R104W, Section 36 S 1/2 -	238 acres
T4N, R104W, Section 36 N 1/2 -	345 acres
T4N, R103W, Section 16 -	626 acres
Total State	1,209 acres

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Additional BLM Lands

T4N, R103W, Sections 15 & 22 - 203 acres

Total Potential Additions - 1,412 acres

The adjusted boundaries for Bull Canyon are shown on Map 2-1 and can be compared with the configuration of the original inventory boundary for Bull Canyon on Map 1-1 which is addressed under the All Wilderness alternative.

SUMMARY OF PREFERRED ALTERNATIVE FOR EACH WSA

The preferred alternative is to recommend part of the Bull Canyon WSA as eligible for wilderness designation and to recommend five WSAs (Willow Creek, Skull Creek, Black Mountain, Windy Gulch and Oil Spring Mountain) as unsuitable for wilderness designation.

The following table summarizes the preferred alternative.

WILDERNESS STUDY AREAS	Alternatives		
	All Wil- derness	No Wilderness (No Action)	Boundary Adjustment (Partial Wilderness)
Bull Canyon CO-010-001/ UT-080-419	X (12,297 acres)	X	Preferred Alter. (11,690 acres)
Willow Creek CO-010-002	X	Preferred Alter. (13,368 acres)	N/A
Skull Creek CO-010-003	X	Preferred Alter. (13,740 acres)	N/A
Black Mtn. CO-010-007A	X	Preferred Alter. (9,932 acres)	N/A
Windy Gulch CO-010-007C	X	Preferred Alter. (2,274 acres)	N/A
Oil Spg. Mtn. CO-010-046	X	Preferred Alter. (17,740 acres)	N/A

X = Alternative analyzed in EIS but not recommended.

N/A = Alternative is not analyzed in EIS.

RELATIONSHIP OF PREFERRED ALTERNATIVE WITH ISSUES AND CONCERNS

The following discussion responds to issues and concerns identified in the public scoping process:

(1) Designation of Bull Canyon would not conflict with the "national goal" of energy self-sufficiency as the energy reserves in this area are estimated to be low to nonexistent in economic quantities.

(2) The designation of Bull Canyon would not conflict with any state or local land use plans or policy.

(3) The BLM considered future potentials, in addition to present uses in Bull Canyon, and discovered that the potential for uses other than wilderness were low. These included wood products, grazing, energy and intensive recreation.

(4) The impacts of designation of Bull Canyon on any single resource would not be significant, nor are any cumulative impacts anticipated.

(5) The mineral potential for all the study areas was assessed as adequately as possible without actual drilling taking place. Both BLM and USGS geologists analyzed the study areas' stratigraphy and previous drilling records of wells drilled in or near them. In addition, energy related industry, lease holders, and all concerned parties were requested to rate the mineral potential for each study area and the results compiled.

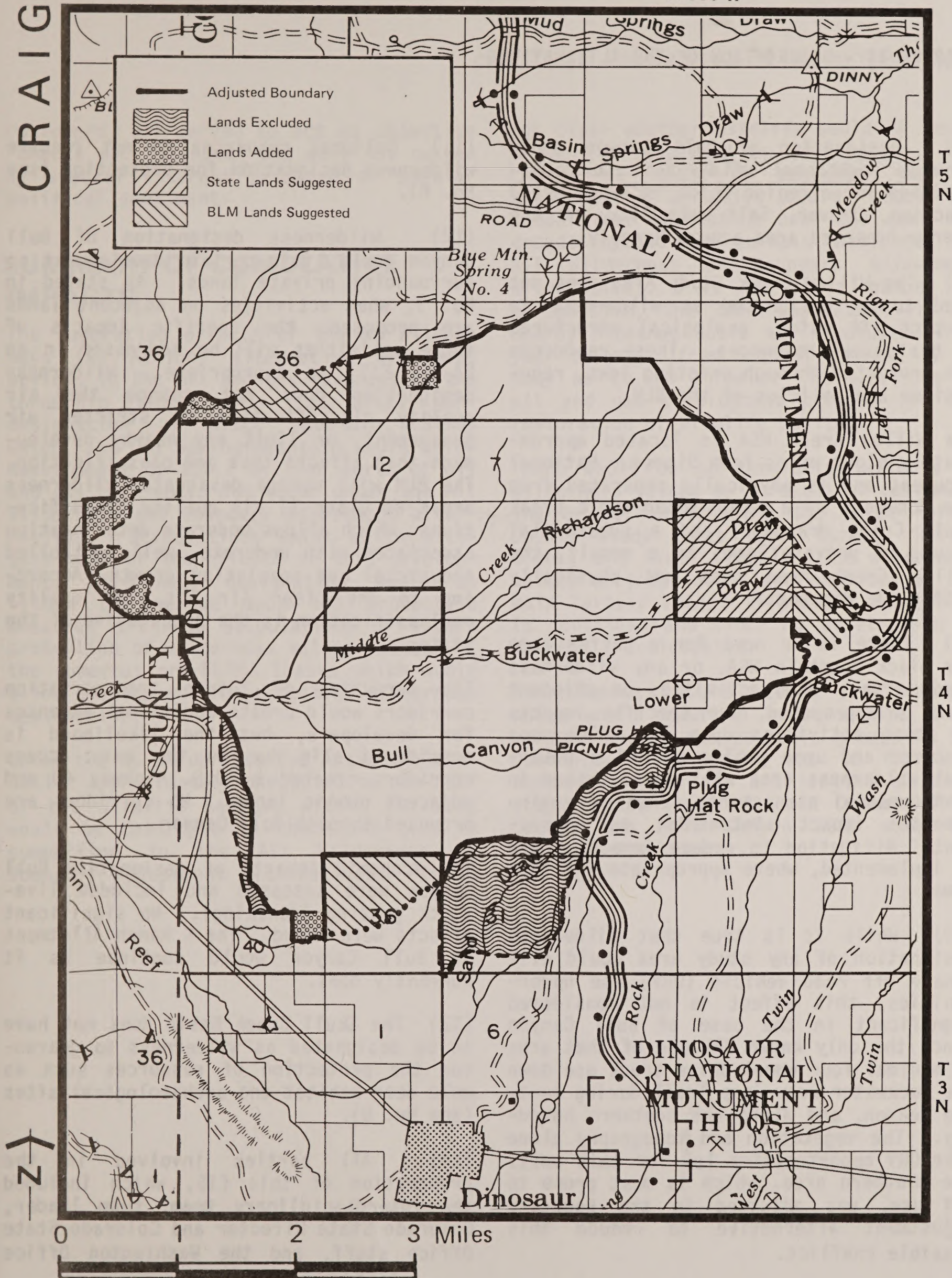
(6) The Windy Gulch Study Area does not need to be designated as wilderness for protection of critical elk habitat. Protection is provided through regular management.

R 25 E

R 104 W

R 103 W

CRAIG



Map 2-1 - Bull Canyon - Wilderness Boundary Adjustment

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(7) Designation of Bull Canyon would provide additional wilderness use opportunities for a region which includes Grand Junction, Denver, Salt Lake City and the energy impacted area around Rangely.

(8) The Willow Creek Study Area does not need to be designated as wilderness to protect its water, geological structures or historical resources. These resources are protected through existing laws, regulations and policies of the BLM.

The Willow Creek WSA is located approximately eight miles from Dinosaur National Monument and is physically separated from the Monument by a major topographic break (Wolf Creek drainage) and a substantial amount of private land. As a result, the Willow Creek Area does not physically buffer the Monument.

(9) There is no need for a buffer zone for Black Mountain WSA, or any wilderness study area. When activities on adjacent lands are proposed, the specific impacts of those activities upon the wilderness resource and upon public use of a potential wilderness area will be addressed in environmental assessments (EAs) or environmental impact statements, as appropriate. Mitigation to reduce impacts could be implemented, where appropriate, at that time.

(10) While it is true that wilderness designation of any study area would eliminate off road vehicle (ORV) use opportunities, this effect is not considered significant in the case of Bull Canyon since the only known ORV use of that area is minimal four wheel drive truck use down the Buckwater Draw Jeep Trail during hunting season, and along the southern boundary. The vegetation and topography alone make ORV opportunities low for this unit. The southern area, which is most prone to ORV use, was adjusted in the Boundary Adjustment alternative to reduce this possible conflict.

(11) Cultural resources do not require wilderness designation for protection (see No. 8).

(12) Wilderness designation of Bull Canyon could limit certain development on surrounding private lands. As stated in No. 9, when activities on adjacent lands are proposed, the specific impacts of those activities will be addressed in an EA or EIS, as appropriate. Wilderness designation does not change the air quality classification to stricter air management, or limit any nearby development that affects that new classification. The BLM will manage designated wilderness areas as Class II air quality classifications, which allows moderate deterioration associated with moderate, well controlled industrial and population growth. According to the Clean Air Act, air quality reclassification is the prerogative of the states.

The rerouting of future transportation corridors would create additional expenses for developers, but the likelihood is considered slim due to the easy access corridors created by U.S. Highway 40 and adjacent public lands. No corridors are proposed through Bull Canyon.

The economic impacts of designating Bull Canyon were assessed and included livestock grazing (ranching). No significant effects were found. The K Ranch Allotment in Bull Canyon would continue as it currently does.

(13) The Skull Creek Basin does not have to be designated as wilderness to guarantee the protection of resources such as mule deer habitat and archaeological sites (see No. 8).

(14) All parties involved in the preparation of this EIS, which included the interdisciplinary team, team leader, Colorado State Director and Colorado State Office staff, and the Washington Office

reviewers, all served to act as objective "checks and balances" and were not swayed by special interest pressure or popular political sentiment.

SUMMARY OF CUMULATIVE IMPACTS

The cumulative effects of the No Wilderness (No Action) alternative are most obvious in the oil and gas revenues of the three Rio Blanco County study areas. Non-designation of Black Mountain, Windy Gulch, and Oil Spring Mountain would allow development of \$10.7 million worth of oil and gas that would not occur under the All Wilderness and Boundary Adjustment alternatives. Stipulations exist which mitigate most of the effects of this development. Wilderness designation would do little to improve upon the protective measures of these stipulations or insure protection of wilderness values because of the numerous pre-FLPMA leases which would allow development regardless of wilderness designation.

Under the No Wilderness (No Action) alternative approximately one-third to one-half of the wildlife habitat within the WSAs would be destroyed in the short term in comparison to the All Wilderness or Boundary Adjustment alternatives. It is

not clear whether wildlife would be lost, or merely displaced by development. If the worst case is assumed, the No Wilderness alternative could reduce the annual deer population over the next few decades by 330 more animals than under the All Wilderness or Boundary Adjustment alternatives. To put this number in perspective, the deer population in the nearby Piceance Basin has fluctuated from year to year, from natural causes, by as many as 20,000 animals. Stipulations on oil and gas development provide for the restoration of wildlife habitat.

There would be no cumulative effects on wilderness values as a result of designating or not designating the three Moffat County study areas (Bull Canyon, Willow Creek, and Skull Creek). The wilderness values of these areas are expected to remain largely intact if present management is continued and since no development is currently anticipated.

Some impacts would result from changes which would occur in relationships among various social and economic groups in the community of Dinosaur due to increased numbers of tourists and lengths of their stays in the area, if Skull Creek, Willow Creek, and Bull Canyon WSAs were all designated wilderness.

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
BULL CANYON	Climate, geology, topography, T&E Species, Alluvial Valleys, Noise	No Impacts	No Impacts	No Impacts
	Air Quality, Soils, Water, Transporta- tion, Lands & Access, Social, Economic	Negligible	Negligible	Negligible
	Minerals	Minor adverse. Potential for reserves is low and 42% of area is covered by pre-FLPMA leases.	Minor benefi- cial. Full min- eral development would be permit- ted although potential for reserves is low.	Same as All Wilder- ness alternative.
	Forestry	Minor adverse. Would prohibit a 200-300 acre commercial fence- post sale.	Minor benefi- cial. Would allow commercial fence post sale.	Same as All Wilder- ness alternative.
	Livestock Grazing	Minor adverse. No direct loss of livestock production; po- tential increase of 19 AUMs/yr would be lost.	Minor benefi- cial. Potential increase of 19 AUMs/yr could be realized.	Same as All Wilder- ness alternative.
	Wildlife	Minor beneficial. Provide manage- ment protection from post-FLPMA development; min- imize encroach- ment of habitat.	Minor adverse. Full mineral de- velopment would be permitted al- though potential for reserves is low; encroach- ment of habitat possible.	Same as All Wilder- ness alternative.

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
BULL CANYON (Cont.)	Cultural	Minor beneficial. Provide manage- ment protection from post-FLPMA development; re- duce surface dis- turbance which could damage cultural sites.	Minor adverse. Full mineral development would be permit- ted; subsurface cultural sites could be impact- ed.	Same as All Wilder- ness alternative.
	Visual	Minor beneficial. Would protect visual quality.	Minor adverse. No major chan- ges in visual quality are an- ticipated due to low develop- ment potential.	Same as All Wilder- ness alternative.
	Recreation	Minor adverse impact to nonwil- derness types of recreation. Would protect the out- standing primitive recreation oppor- tunities.	Minor. No major development is anticipated which would affect primitive recreation opportunities.	Same as All Wilder- ness alternative.
	Wilderness	Beneficial. Wil- derness values would be protect- ed.	Minor adverse. Wilderness char- acteristics would not be protected.	Beneficial. Would enhance manageabil- ity of the WSA so that wilderness characteristics could be better protected.

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
WILLOW CREEK	Climate, geology, topography, T&E Species, Alluvial Valleys, Noise	No Impacts	No Impacts	N/A
	Air Quality, Soils, Water, Transporta- tion, Lands & Access, Social, Economic	Negligible	Negligible	N/A
	Minerals	Minor adverse. Potential for reserves is low and 33% of area is covered by pre-FLPMA leases.	Minor benefi- cial. Full min- eral development would be permit- ted although potential for reserves is low.	N/A
	Forestry	Minor adverse. Would prohibit commercial forest product sales.	Minor benefi- cial. Would allow commercial forest product sales.	N/A
	Livestock Grazing	Minor adverse. No direct loss of livestock production; po- tential increase of 53 AUMs/yr would be lost.	Minor benefi- cial. Potential increase of 53 AUMs/yr could be realized.	N/A
	Wildlife	Minor beneficial. Provide manage- ment protection from post-FLPMA development; min- imize encroach- ment of habitat.	Minor adverse. Full mineral de- velopment would be permitted al- though potential for reserves is low; encroach- ment of habitat possible.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		Boundary Adjustment (Partial Wilderness)
		All Wilderness	No Wilderness	
WILLOW CREEK (Cont.)	Cultural	Minor beneficial. Provide manage- ment protection from post-FLPMA development; re- duce surface dis- turbance which could damage cultural sites.	Minor adverse. Full mineral development would be permit- ted; subsurface cultural sites could be impact- ed.	N/A
	Visual	Minor beneficial. Would protect visual quality.	Minor adverse. No major chan- ges in visual quality are an- ticipated due to low develop- ment potential.	N/A
	Recreation	Minor adverse impact to nonwil- derness types of recreation. Would protect the out- standing primitive recreation oppor- tunities.	Minor. No major development is anticipated which would affect primitive recreation opportunities.	N/A
	Wilderness	Beneficial. Wil- derness values would be protect- ed.	Minor adverse. Wilderness char- acteristics would not be protected.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
SKULL CREEK	Climate, geology, topography, T&E Species, Alluvial Valleys, Noise	No Impacts	No Impacts	N/A
	Air Quality, Soils, Water, Transporta- tion, Lands & Access, Social, Economic	Negligible	Negligible	N/A
	Minerals	Minor adverse. Potential for reserves is low and 25% of area is covered by pre-FLPMA leases.	Minor benefi- cial. Full min- eral develop- ment would be permitted al- though poten- tial for re- serves is low.	N/A
	Forestry	Minor adverse. Would prohibit commercial forest product sales.	Minor benefi- cial. Would allow commercial forest product sales.	N/A
	Livestock Grazing	Minor adverse. No direct loss of livestock production; po- tential increase of 264 AUMs/yr would be lost.	Minor benefi- cial. Potential increase of 264 AUMs/yr could be realized.	N/A
	Wildlife	Minor beneficial. Provide manage- ment protection from post-FLPMA development; min- imize encroach- ment of habitat.	Minor adverse. Full mineral de- velopment would be permitted al- though potential for reserves is low; encroach- ment of habitat possible.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
SKULL CREEK (Cont.)	Cultural	Minor beneficial. Provide manage- ment protection from post-FLPMA development; re- duce surface dis- turbance which could damage cultural sites.	Minor adverse. Full mineral development would be permit- ted; subsurface cultural sites could be impact- ed.	N/A
	Visual	Minor beneficial. Would protect visual quality.	Minor adverse. No major chan- ges in visual quality are an- ticipated due to low develop- ment potential.	N/A
	Recreation	Minor adverse impact to nonwil- derness types of recreation. Would protect the out- standing primitive recreation oppor- tunities.	Minor. No major development is anticipated which would affect primitive recreation opportunities.	N/A
	Wilderness	Beneficial. Wil- derness values would be protect- ed.	Minor adverse. Wilderness char- acteristics would not be protected.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
BLACK MOUNTAIN	Climate, geology, topography, T&E Species, Alluvial Valleys, Noise	No Impacts	No Impacts	N/A
	Air Quality, Soils, Water, Transporta- tion, Lands & Access	Negligible	Negligible	N/A
	Minerals	Minor adverse. Potential for reserves is high but 53% of area is covered by pre-FLPMA leases.	Minor benefi- cial. Full min- eral develop- ment would be permitted; po- tential for re- serves is high.	N/A
	Forestry	Minor adverse. Would prohibit commercial forest product sales.	Minor benefi- cial. Would allow commercial forest product sales.	N/A
	Livestock Grazing	Minor adverse. No direct loss of livestock production; po- tential increase of 96 AUMs/yr would be lost.	Minor benefi- cial. Potential increase of 96 AUMs/yr could be realized.	N/A
	Wildlife	Minor beneficial. Provide manage- ment protection from post-FLPMA development; min- imize encroach- ment of habitat.	Minor adverse. Full mineral de- velopment would be permitted; potential for reserves is high; encroach- ment of habitat possible.	N/A
	Social	Minor. Develop- ment on pre-FLPMA leases.	Minor. Addition- al development on post-FLPMA leases.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		Boundary Adjustment (Partial Wilderness)
		All Wilderness	No Wilderness	
BLACK MOUNTAIN (Cont.)	Economics	Adverse. Potential loss of \$3.2 million in production of natural gas in area not covered by pre-FLPMA leases.	Beneficial. Full development potential for oil and gas would be realized.	N/A
	Cultural	Minor beneficial. Provide management protection from post-FLPMA development; reduce surface disturbance which could damage cultural sites.	Minor adverse. Full mineral development would be permitted; subsurface cultural sites could be impacted.	N/A
	Visual	Minor beneficial. Would protect visual quality; some adverse impacts from development of pre-FLPMA leases would occur regardless of designation.	Significant adverse. Major changes in visual quality are anticipated due to high development potential.	N/A
	Recreation	No impact. Potential for mineral reserves is high and 53% of area is covered by pre-FLPMA leases so designation would not protect primitive recreation opportunities.	Significant adverse. Major development is anticipated which would affect wildlife habitat and hunting opportunities.	N/A
	Wilderness	No impact. Potential for mineral reserves is high and 53% of area is covered by pre-FLPMA leases so designation would not protect wilderness characteristics.	Significant adverse. Wilderness characteristics would not be protected.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		Boundary Adjustment (Partial Wilderness)
		All Wilderness	No Wilderness	
WINDY GULCH	Climate, geology, topography, T&E Species, Alluvial Valleys, Noise	No Impacts	No Impacts	N/A
	Air Quality, Soils, Water, Transporta- tion, Lands & Access	Negligible	Negligible	N/A
	Minerals	Minor adverse. Potential for reserves is high but 73% of area is covered by pre-FLPMA leases.	Minor benefi- cial. Full min- eral develop- ment would be permitted; po- tential for re- serves is high.	N/A
	Forestry	Minor adverse. Would prohibit commercial forest product sales.	Minor benefi- cial. Would allow commercial forest product sales.	N/A
	Livestock Grazing	Minor adverse. No direct loss of livestock production; po- tential increase of 192 AUMs/yr would be lost.	Minor benefi- cial. Potential increase of 192 AUMs/yr could be realized.	N/A
	Wildlife	Minor beneficial. Provide manage- ment protection from post-FLPMA development; min- imize encroach- ment of habitat.	Minor adverse. Full mineral de- velopment would be permitted; potential for reserves is high; encroach- ment of habitat possible.	N/A
	Social	Minor. Develop- ment on pre-FLPMA leases.	Minor. Addition- al development on post-FLPMA leases.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
WINDY GULCH (Cont.)	Economics	Adverse. Potential loss of \$2.7 million in production of natural gas in area not covered by pre-FLPMA leases.	Beneficial. Full development potential for oil and gas would be realized.	N/A
	Cultural	Minor beneficial. Provide management protection from post-FLPMA development; reduce surface disturbance which could damage cultural sites.	Minor adverse. Full mineral development would be permitted; subsurface cultural sites could be impacted.	N/A
	Visual	Minor beneficial. Would protect visual quality; some adverse impacts from development of pre-FLPMA leases would occur regardless of designation.	Significant adverse. Major changes in visual quality are anticipated due to high development potential.	N/A
	Recreation	No impact. Potential for mineral reserves is high and 73% of area is covered by pre-FLPMA leases so designation would not protect primitive recreation opportunities.	Significant adverse. Major development is anticipated which would affect wildlife habitat and hunting opportunities.	N/A
	Wilderness	No impact. Potential for mineral reserves is high and 73% of area is covered by pre-FLPMA leases so designation would not protect wilderness characteristics.	Significant adverse. Wilderness characteristics would not be protected.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
OIL SPRING MOUNTAIN	Climate, geology, topography, T&E Species, Alluvial Valleys, Noise	No Impacts	No Impacts	N/A
	Air Quality, Soils, Water, Transporta- tion, Lands & Access	Negligible	Negligible	N/A
	Minerals	Minor adverse. Potential for reserves is high but 69% of area is covered by pre-FLPMA leases.	Minor benefi- cial. Full min- eral develop- ment would be permitted; po- tential for re- serves is high.	N/A
	Forestry	Minor adverse. Would prohibit commercial forest product sales.	Minor benefi- cial. Would allow commercial forest product sales.	N/A
	Livestock Grazing	Minor adverse. No direct loss of livestock production; po- tential increase of 101 AUMs/yr would be lost.	Minor benefi- cial. Potential increase of 101 AUMs/yr could be realized.	N/A
	Wildlife	Minor beneficial. Provide manage- ment protection from post-FLPMA development; min- imize encroach- ment of habitat.	Minor adverse. Full mineral de- velopment would be permitted; potential for reserves is high; encroach- ment of habitat possible.	N/A
	Social	Minor. Develop- ment on pre-FLPMA leases.	Minor. Addition- al development on post-FLPMA.	N/A

TABLE 2-1
COMPARATIVE ANALYSIS OF IMPACTS

WSA	Resource Value	Alternatives		
		All Wilderness	No Wilderness	Boundary Adjustment (Partial Wilderness)
OIL SPRING MOUNTAIN (Cont.)	Economics	Adverse. Potential loss of \$2.7 million in production of natural gas in area not covered by pre-FLPMA leases.	Beneficial. Full development potential for oil and gas would be realized.	N/A
	Cultural	Minor beneficial. Provide management protection from post-FLPMA development; reduce surface disturbance which could damage cultural sites.	Minor adverse. Full mineral development would be permitted; subsurface cultural sites could be impacted.	N/A
	Visual	Minor beneficial. Would protect visual quality; some adverse impacts from development of pre-FLPMA leases would occur regardless of designation.	Significant adverse. Major changes in visual quality are anticipated due to high development potential.	N/A
	Recreation	No impact. Potential for mineral reserves is high and 69% of area is covered by pre-FLPMA leases so designation would not protect primitive recreation opportunities.	Significant adverse. Major development is anticipated which would affect wildlife habitat and hunting opportunities.	N/A
	Wilderness	No impact. Potential for mineral reserves is high and 69% of area is covered by pre-FLPMA leases so designation would not protect wilderness characteristics.	Significant adverse. Wilderness characteristics would not be protected.	N/A

COMPARATIVE ANALYSIS OF THE

Area	Economic	Social	Political	Cultural
Oil	The oil industry is a major source of revenue for the government. It provides a significant portion of the national budget. The industry is heavily regulated by the government.	The oil industry has a significant impact on the economy. It provides a source of employment and income for many people. The industry is also a major source of tax revenue for the government.	The oil industry is a key player in the political arena. It has a strong voice in the formulation of public policy. The industry is also a major source of lobbying and campaign contributions.	The oil industry is a major part of the national identity. It is a source of pride and a symbol of national strength. The industry is also a major source of cultural inspiration.
Economic	The economy is a major source of revenue for the government. It provides a significant portion of the national budget. The economy is heavily regulated by the government.	The economy has a significant impact on the economy. It provides a source of employment and income for many people. The economy is also a major source of tax revenue for the government.	The economy is a key player in the political arena. It has a strong voice in the formulation of public policy. The economy is also a major source of lobbying and campaign contributions.	The economy is a major part of the national identity. It is a source of pride and a symbol of national strength. The economy is also a major source of cultural inspiration.
Social	The social sector is a major source of revenue for the government. It provides a significant portion of the national budget. The social sector is heavily regulated by the government.	The social sector has a significant impact on the economy. It provides a source of employment and income for many people. The social sector is also a major source of tax revenue for the government.	The social sector is a key player in the political arena. It has a strong voice in the formulation of public policy. The social sector is also a major source of lobbying and campaign contributions.	The social sector is a major part of the national identity. It is a source of pride and a symbol of national strength. The social sector is also a major source of cultural inspiration.
Political	The political sector is a major source of revenue for the government. It provides a significant portion of the national budget. The political sector is heavily regulated by the government.	The political sector has a significant impact on the economy. It provides a source of employment and income for many people. The political sector is also a major source of tax revenue for the government.	The political sector is a key player in the political arena. It has a strong voice in the formulation of public policy. The political sector is also a major source of lobbying and campaign contributions.	The political sector is a major part of the national identity. It is a source of pride and a symbol of national strength. The political sector is also a major source of cultural inspiration.
Cultural	The cultural sector is a major source of revenue for the government. It provides a significant portion of the national budget. The cultural sector is heavily regulated by the government.	The cultural sector has a significant impact on the economy. It provides a source of employment and income for many people. The cultural sector is also a major source of tax revenue for the government.	The cultural sector is a key player in the political arena. It has a strong voice in the formulation of public policy. The cultural sector is also a major source of lobbying and campaign contributions.	The cultural sector is a major part of the national identity. It is a source of pride and a symbol of national strength. The cultural sector is also a major source of cultural inspiration.

CHAPTER III

Energy and Telecommunications

CHAPTER III

AFFECTED ENVIRONMENT

CHAPTER III

AFFECTED ENVIRONMENT

Of the six WSAs considered in this document, five are located in close proximity to at least one other WSA, and as such they share common environments and resources. Their location within the same resource area boundary also provides some similarities, such as air quality. The Bull Canyon, Willow Creek and Skull Creek WSAs are located adjacent to one another as are Black Mountain and Windy Gulch. All six WSAs are located within a 40-mile radius of each other.

Resource values whose affected environments are similar for all six WSAs are discussed first in this Chapter. Values which are specific to one or more WSAs are discussed secondly under the heading of the individual WSA. To keep repetition to a minimum, some discussions are referenced to those detailed earlier in the chapter.

RESOURCES COMMON TO ALL WSAs

Climate and Air Quality

The climate of the area is broadly described as semi-arid.

Temperature ranges from -43°F to 96°F with an average minimum temperature of 20°F and an average maximum of 67°F. Precipitation varies from 10 to 30 inches most years. Thunderstorms of high intensity and short duration are the common precipitation pattern. Snow depth varies from several inches at lower elevations to several feet on mountain and ridge tops. Snowfall occurs from late September through mid-April, with the heaviest accumulations in December, January and February. The dry, often windy climate, best supports sagebrush, pinyon-juniper forest and grassy vegetation.

The entire White River Resource Area has a Federal Air Quality Class II designation. The closest Class I designation is the Flattops Wilderness Area. Dinosaur National Monument has been proposed for Class I designation. While no actual air quality measurements have been made, it is assumed that the quality is good to excellent. Some minor effects from oil and gas development on the air quality are in the form of particulate matter from construction traffic and from motorized equipment. These affects are temporary in nature.

Geology and Paleontology

The geology covers many types, varying in age, rock type, geologic structure and physical expression. Exposed sedimentary rocks range in age from the Mississippian Leadville Limestone (325 million years old) to the Tertiary Green River Formation (30 million years old).

Distribution of most of the rock formations are shown on various regional maps, such as those compiled by Miller (1977) and Tweto (1979). Discussion of rock units of economic interest will be more fully described in the minerals sections of this report.

Although no comprehensive study has been completed, many individual studies have been done on fossil occurrences in Colorado. The BLM is in the process of a literature search, in order to prepare an initial classification of the resource area with respect to paleontologic resources. This preliminary analysis shows the Morrison, Wasatch and Green River Formations to have possibly significant deposits. All of the above mentioned formations have produced significant vertebrate fossils in the past.

Alluvial Valleys/ Prime or Unique Farmlands

None are classified or known to occur within any of the WSAs.

Minerals

Both BLM and USGS geologists have estimated the critical mineral resources other than energy minerals, to be insignificant in all six WSA. This is a preliminary estimate that utilized the industry mineral rating solicited. Refer to each specific wilderness study area for a discussion of energy minerals. This should not be confused with the Mineral Survey Report required by Section 603(a) of FLPMA, "prior to any recommendations for the designation of an area as wilderness", and jointly conducted by the U.S. Geological Survey (USGS) and Bureau of Mines.

Vegetation

Vegetation resources are addressed by their uses; for example: livestock grazing, forestry and wildlife habitat.

Forestry

A significant portion of all six WSAs are covered by pinyon-juniper woodlands consisting primarily of Colorado pinyon (Pinus edulis) and Utah juniper (Juniperus osteosperma). Scattered Douglas fir are found throughout the Oil Spring Mountain WSA at the higher elevations on north slopes, but do not occur in other WSAs.

Of all forest and woodland acres only a small portion is considered to be commercially available, in terms of forest man-

agement. No large scale commercial activities are scheduled, pending wilderness designation. However there are areas considered suitable and desirable for commercial interest, especially for pinyon firewood and juniper fenceposts.

Livestock Grazing

The six WSAs encompass portions of 14 livestock grazing allotments (Table 3-1). These 14 allotments in total comprise 395,472 acres of public land which produce 33,418 animal unit months (AUMs) of forage allocated for livestock grazing. In comparison, the six WSAs contain 79,261 acres of public land which produce 4,459 AUMs of forage allocated for livestock grazing.

Four allotments (K Ranch, Wolf Creek, Twin Buttes, and Evacuation Creek) are grazed by cattle throughout most of the year. The Basin Springs, Black's Gulch and Jordan Gulch allotments are grazed by cattle during the spring, summer and fall seasons of the year. The Upper Smith Gulch and Villa allotments are grazed by cattle during spring and summer. The West Strawberry and Strawberry Peak allotments are grazed by cattle during summer and fall. The Skull Creek and Lower Smith Gulch allotments are grazed by cattle during the spring, fall and early winter. The Artesia allotment is grazed by sheep during the spring and winter.

A majority of the livestock grazing use on the Bull Canyon, Willow Creek, and Skull Creek WSAs occurs during the spring, late fall and early winter season of the year. A majority of the livestock grazing use on Black Mountain, Windy Gulch, and Oil Spring Mountain WSAs occurs during the spring and fall seasons with some summer grazing occurring at the higher elevations of the Windy Gulch and Oil Spring Mountain WSAs.

TABLE 3-1

ACREAGE AND AUMs 1/ BY ALLOTMENT FOR EACH WSA

Lvsk Grazing Allotment No.	Total Acres In Allotment (Public Land)	Total AUMs In Allotment (Public Land)	Bull Canyon		Willow Creek		Skull Creek		Black Mtn.		Windy Gulch		Oil Spring Mtn. WSA	
			WSA		WSA		WSA		WSA		WSA		WSA	
			Acres	AUMs	Acres	AUMs	Acres	AUMs	Acres	AUMs	Acres	AUMs	Acres	AUMs
K Ranch (6307)	41,402	3,440	11,990	795	9,833	652	--	--	--	--	--	--	--	--
Basin Springs (6304)	6,225	1,100	307	31	--	--	--	--	--	--	--	--	--	--
Artesia (6308)	41,364	4,200	--	--	2,205	85	1,470	47	--	--	--	--	--	--
Wolf Creek (6323)	53,155	4,362	--	--	1,330	75	8,100	324	--	--	--	--	--	--
Skull Creek (6322)	8,724	392	--	--	--	--	4,170	156	--	--	--	--	--	--
Lower Smith Gulch (6621)	8,570	391	--	--	--	--	--	--	7,502	368	--	--	--	--
Black's Gulch (6612)	24,770	2,609	--	--	--	--	--	--	1,590	183	--	--	--	--
Upper Smith Gulch (6613)	8,657	898	--	--	--	--	--	--	840	84	4,964	385	--	--
Jordan Gulch (6620)	6,350	413	--	--	--	--	--	--	--	--	6,150	400	--	--
West Strawberry (6614)	390	60	--	--	--	--	--	--	--	--	40	2	--	--
Strawberry Peak (6615)	900	60	--	--	--	--	--	--	--	--	500	29	--	--
Villa (6619)	620	63	--	--	--	--	--	--	--	--	620	63	--	--
Twin Buttes (6364)	134,602	11,371	--	--	--	--	--	--	--	--	--	--	8,088	450
Evacuation Creek (6357)	59,743	4,059	--	--	--	--	--	--	--	--	--	--	9,562	330
TOTALS	395,472	33,418	12,297	826	13,368	812	13,740	527	9,932	635	12,274	879	17,650	780

1/ AUM = animal unit month the amount of forage needed to support one cow for one month.

CHAPTER III - AFFECTED ENVIRONMENT

Three of the 14 allotments (K Ranch, Black Gulch and Twin Buttes) are presently under allotment management plans (AMPs). The remaining allotments are scheduled for AMP development within the next five to eight years.

All six WSAs have existing livestock management facilities. The Bull Canyon WSA has two developed springs with watering troughs, two earthen stock ponds, six miles of fence and one well with 3/4 mile of pipeline and two watering troughs. The Willow Creek WSA has two developed springs with watering troughs, three miles of fence and one earthen stock pond. The Skull Creek WSA has 1/2 mile of fence. The Oil Spring Mountain WSA has four improved springs with earthen dugout pits and one earthen stock pond. The Black Mountain WSA has nine earthen stock ponds and seven miles of fence of which four miles occurs on the southern boundary of the WSA. The Windy Gulch WSA has four earthen stock ponds.

Recreation

Recreational use of the WSAs have been low. While no visitor-use studies have been conducted, the resource area specialists have noted that recreational use has been limited to deer, elk and grouse hunting. Low recreation use is due to several factors, including limited access, abundant alternative lands that are easily accessible, and the lack of large population centers nearby.

Opportunities for primitive recreation use, such as horseback riding, photography, nature study, and hiking are outstanding, but little used. The WSAs have predominantly semi-primitive settings and outstanding opportunities for solitude which enhance the recreation opportunities. The opportunities for developed

recreation sites, such as campsites, nature centers, etc. are low.

Social

An Associated Press/NBC news survey found that by 48 to 39 percent, respondents thought maintaining wilderness is more important than developing natural resources, and 52 to 37 percent said protecting the environment is important even if it means paying more for industrial products. The Behavioral Research Center of Phoenix found that 54 percent of Rocky Mountain States residents polled said it was more important to "protect the environment" than to "promote growth".

Opinions of local northwest Colorado residents have not been adequately polled. There is some evidence that local leaders in these communities may prefer alternatives favoring economic development, but the best evidence available is that many local citizens may favor keeping the region as free from change as possible to preserve its traditional beauties and social values. Recent economic slow-downs in coal and oil shale may have moderated that view somewhat.

Meeker, Rangely and Dinosaur would potentially be affected by wilderness designation or nondesignation of these WSAs.

Dinosaur and Rangely are currently experiencing "boom" conditions from the Western Fuels coal mine and Deseret Generating Plant. Thus even limited additional population growth would generate social problems due to housing shortages and some facilities overloads such as for mental health, where budget cuts have already limited needed expansion of services.

Meeker is more capable of absorbing new population.

referred to as eastern and western Rio Blanco County in the text.

Economic

Because most economic data is not available for geographic units smaller than a county, it is necessary to define the resource area in terms of entire counties. Therefore, the White River Resource Area, for economic analysis, consists of Rio Blanco County. However, data for the town of Dinosaur, in western Moffat County, is included wherever appropriate. Where BLM-controlled resources are located outside of Rio Blanco County (in adjacent portions of Garfield and Moffat Counties) the resources are included in the analysis but their use is treated as affecting only Rio Blanco County.

Rio Blanco County is divided by the Bureau of the Census into the Meeker and Rangely Divisions, which correspond to the areas

Mineral production, agriculture, and tourism compose the resource area's principal economic base. Smaller contributions are added by forestry, manufacturing, transportation, wholesale trade, and higher education. Other types of local economic activity serve to support these export-oriented industries (export meaning that most of their product is sold to customers outside the resource area) and serve the local population. Estimates of 1979 exports by industry are given in Table 3-2.

The mining industry has been growing substantially in recent years, and its importance in the local economy is ranked number one. Conventional oil and gas production has provided the largest part of the increase so far. However, the greatest potential growth could come from the oil shale industry, which has gener-

TABLE 3-2
EXPORTS 1/ FROM THE RESOURCE AREA BY INDUSTRY

	1976	1979
Agriculture	\$ 10,030	\$ 15,412
Mining	201,041	272,044
Tourism	1,518	2,544
Other <u>2/</u>	<u>8,435</u>	<u>16,939</u>
	\$ 221,024	\$ 306,939

1/ Exports means sales to any place outside the resource area.

2/ Other exports includes forestry, manufacturing, transportation, wholesale trade, higher education, and local taxes paid by outside firms.

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ated a considerable amount of construction activity. Coal mining is another possible growth area.

Although large numbers of hunters come to the White River area each year, the commercial tourist industry remains a relatively minor part of the local economy. Agricultural earnings fluctuate widely with no discernable trend, but livestock inventories have tended to become smaller. Agricultural employment has remained more stable than in the rest of the nation. Several other industries contribute marginally to total exports, but none have shown a significant increase.

The average individual income in the resource area has increased rapidly in the last few years, surpassing the rest of the state (Table 3-3). However, figures for individual sectors present a very mixed pattern, with many incomes remaining well below state averages. In fact, the large increase in the relatively well-paid mining and construction labor force in the resource area is mostly responsible for the gain, and local pay rates in many industries are not moving appreciably closer to state averages.

Exceptions to this trend involve cases of fluctuating earnings (agriculture), large firms paying at state-average rates (transportation- communication- utilities and finance-insurance-real estate), and a few high incomes in a small sector (manufacturing and services). The fact that past growth has resulted in large scale commuting rather than local infrastructure development has retarded income gains. Unless continuing growth reverses this pattern, other local incomes seem likely to remain below state averages.

Local sources provide most of the revenues of government bodies in the resource area. As shown in Table 3-4, Rio Blanco County obtains about half of its funds locally,

while the communities are about 90 percent dependent on their own sources. Local revenues make up from 65 to 95 percent of the school districts' budgets. Therefore, BLM actions affecting the resource area have the potential to impact local government finances significantly.

Rough measures of the adequacy of local funding sources are provided by assessed valuation per capita and retail sales per capita figures. The figures show that the county and both school districts have sufficient tax bases for their needs. However, the relatively high mill levy in the Meeker school district may indicate large spending requirements stemming from rapid growth. Rangely has a moderately large volume of retail sales because of its role as an oil and gas production center. The other communities lack these advantages and must operate from more limited local resources.

BLM actions to develop resources or withhold them from development would have the most effect on property taxes and sales taxes. Property taxes would be directly affected through the addition of new businesses or reduction of existing ones and resulting changes in land values. Effects on sales taxes would be indirect and would come from increases or decreases in retail and service business resulting from BLM actions.

Probably the most significant impact on local government finances from BLM actions would result from increased capital improvement needs (water and sewer systems, fire trucks, etc.) caused by population growth. Rapid population growth can quickly require capital spending in excess of the resources of most local governments. Conversely, a reduction in population would increase the burden of any existing debt on remaining residents.

TABLE 3-3
AVERAGE INCOME BY INDUSTRY

	1975	1976	1977	1978	1979	1978-79 as percent of 1975-76
<u>Rio Blanco County</u>						
Agriculture	\$ 4,645	\$ 917	\$ -7,140	\$ 38,790	\$ 18,441	1,029
Mining	15,899	21,365	18,062	21,062	27,289	130
Construction	13,708	16,521	21,852	21,920	22,781	148
Manufacturing	13,735	18,346	16,682	17,294	20,483	118
Trans, comm, util	13,554	14,636	16,638	19,275	18,883	135
Trade	7,548	7,382	7,310	3,231	8,914	115
Finance, ins, real estate	14,146	16,523	18,667	20,635	22,000	139
Services	10,492	11,194	12,299	14,181	14,632	133
Government	7,000	7,831	8,100	8,691	9,287	121
Avg. All Industries	9,970	11,419	11,599	15,970	18,811	163
<u>State of Colorado</u>						
Agriculture	\$ 26,258	\$ 15,531	\$ 14,611	\$ 20,658	\$ 26,496	113
Mining	18,515	21,037	21,979	25,130	27,189	132
Construction	15,532	16,754	17,481	18,345	19,749	118
Manufacturing	13,458	14,514	15,759	16,941	18,444	126
Trans, comm, util	15,598	17,511	19,242	20,991	22,681	132
Trade	9,072	9,494	9,890	10,728	11,796	121
Finance, ins, real estate	10,980	12,553	14,428	15,742	16,928	139
Services	10,081	10,572	11,222	12,311	13,595	125
Government	9,742	10,445	11,233	12,208	13,105	125
Avg. All Industries	11,319	11,893	12,752	14,042	15,376	127
<u>Per Capita Income</u>						
Rio Blanco County	\$ 4,518	\$ 5,582	\$ 6,206	\$ 8,140	\$ 8,754	
State of Colorado	6,006	6,526	7,204	8,102	9,114	

TABLE 3-4
LOCAL GOVERNMENT FINANCIAL DATA

	Rio Blanco County	Communities			School Districts	
		Dinosaur	Meeker	Rangely	Meeker	Rangely
<hr/>						
Percent of Total Revenue						
Local	49	87	99	95	64	94
State	34	10	1	4	29	5
Federal	17	3	0	1	7	<u>1/</u>
Per capita assessed valuation	\$ 36,791	\$ 1,303	\$ 2,899	\$ 2,506	\$ 8,838	\$ 72,341
Total mill levy	6.70	25.58	22.21	27.77	48.66	11.16
Per capita retail sales	\$ 9,658	\$ 3,870	\$ 7,932	\$ 13,359		
Sales tax rate	0	<u>2/</u>	1%	1%		
<hr/>						
Bonded indebtedness (000)						
General obligation	\$ 0	\$ 0	\$ 235	\$ 279	\$ 865	\$ 0
Revenue	0	0	1,417	676		

Notes: Community data include enterprise funds and special districts providing water and sanitary service and fire protection. Data is for 1979.

1/ Less than one-half percent.

2/ Dinosaur receives 75% of Moffat County sales taxes (2% tax rate) collected within the city limits.

Sources: Division of Property Taxation, various years. Annual Report Colorado Department of Local Affairs, Denver, Colorado.

Division of Local Government, various years. Local Government Financial Compendium Colorado Department of Local Affairs, Denver, Colorado.

Colorado Department of Revenue, various years. Annual Report Denver, Colorado.

Colorado State Auditor. Files.

Wilderness

BLM wilderness study areas (WSAs) contain a number of dominant physical and biological characteristics which can be integrated and classified into regional land units called ecosystems. The classification of ecosystems is based upon an integration of the natural factors of climate, vegetation, soils, and landform. Wilderness designation presents an opportunity to preserve examples of the basic ecosystems and landforms present in the United States in an unimpaired condition for future generations.

Although there are many land classification systems available, the BLM has selected the Bailey-Kuchler Ecosystem of the United States system utilized by the U.S. Forest Service in its RARE II and "further planning" wilderness studies (Bailey 1976 and Kuchler 1966). The Bailey-Kuchler system was selected because it is a land classification system which facilitates planning at the national level and provides a broad synthesis of current knowledge about the ecosystem geography of the country. It also serves as a useful reference for those who desire an overview on a comparable basis of ecosystem and landform representation in existing and potential National Wilderness Preservation System (NWPS) units.

Land areas providing ecosystem and landform representations within the NWPS should be greater than 1,000 acres in size to typify the dynamics of an ecosystem. On a site specific basis, the Bailey-Kuchler system may be further refined to reflect the presence of unique ecosystems or landforms within WSAs at a finer level of detail than a nationwide land classification system can provide.

The WSAs are all located in the Rocky Mountain Forest Province Ecoregion and are

classified as either pinyon-juniper woodland, sagebrush steppe, and/or mountain mahogany - oak scrub.

The only designated wilderness area in the state with similar type of ecoregion/ecosystem is the Black Canyon of the Gunnison. It contains approximately 11,180 acres of pinyon-juniper woodland. No designated areas in Colorado have a sagebrush steppe classification. In addition, 20,445 acres of the Black Canyon of the Gunnison, and 211,000 acres of Dinosaur National Monument have been administratively endorsed for wilderness designation. This acreage is almost evenly divided between sagebrush steppe and pinyon-juniper woodland.

Of areas currently under study in the state, eleven BLM areas have Rocky Mountain Forest Province/pinyon-juniper woodland, totaling 87,219 acres. An additional eleven BLM areas (some the same as the pinyon-juniper ecosystems) have a Rocky Mountain forest/sagebrush steppe ecosystem, totaling 41,089 acres.

The WSAs are 2 - 1/2 to 3 hours from the closest major metropolitan area (Grand Junction, Colorado) and approximately 5 hours from Denver and Salt Lake City.

RESOURCES WHICH VARY BY WSA

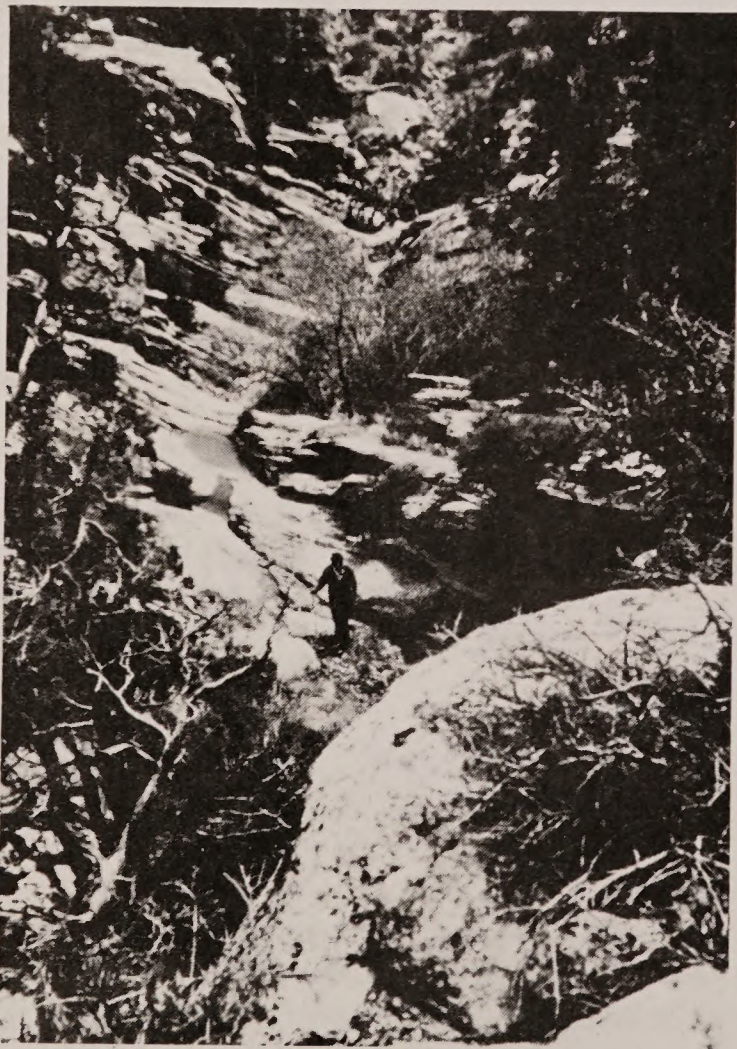
Bull Canyon

TOPOGRAPHY

The area's landforms vary, but elevations generally range between 6,000 and 8,000 feet located along the southern portion of the east-west trending Uinta Mountains.



Bull Canyon



Skull Creek



Willow Creek

This mountain area is often characterized by rimrock escarpments which display massive, almost vertical, rock cliffs.

MINERALS

Oil and Gas

The geologic environment has little potential for accumulation of oil and gas reserves. It includes areas of thin sedimentary rocks, poor hydrocarbon sourcebeds or reservoir rocks. There are large areas of exposed precambrian rocks which generally have no oil and gas potential.

Forty-two percent of Bull Canyon is covered with pre-FLPMA leases and 58 percent by post-FLPMA leases. The amount and configuration of these leases are such that oil and gas development potential could be realized at the rate of four wells per section. The existence of these pre-FLPMA mineral leases presents the possibility of oil and gas exploration. However, because the reserve potential is estimated to be low, only minimal exploration is expected to occur with little to no production. All valid existing mineral rights (oil and gas) will expire within four years, based on 10 year leases taken out on October 20, 1976.

Coal

The USGS in a 1973 report indicated no known coal beds to exist in this area. The Conservation Division of USGS, in a letter dated August 10, 1981, further confirmed that there are no coal resources in this WSA.

Oil Shale

The USGS identified in its Oil Shale Land Classification report, dated April 20, 1981, that this area does not lie in either region classified as an Oil Shale Leasing Area or as Prospectively Valuable for Oil Shale.

SOILS

Seven soil map units have been identified in the wilderness study area. Five of these units comprise the major acreage. These units are: Badlands; Rock outcrop; Massadona - Rock outcrop complex, 5-45 percent slopes; Jackspring loamy fine sand, 5-40 percent slopes; and Owen Creek - Splitro complex, 5-40 percent slopes.

The two units of minor extent are Bankard Loamy Sand, 1-6 percent slopes and Mespun Loamy Sand, 5-25 percent slopes. These soils occur in floodplains and on alluvial fans.

Most of the soils in this area have low potential productivity. Steep slopes, low available moisture, and high natural erosion rates all limit the use of these soils.

WATER

There are two developed springs in the area and a probability of several more undeveloped springs or waterholes. Little information is available on the groundwater. Bull Canyon WSA is drained by tributaries of the Green River.

CHAPTER III - AFFECTED ENVIRONMENT

FORESTRY

An area in the central part of the Bull Canyon WSA has been identified as a potential commercial fencepost sale. At present the WSAs are open to individual use for firewood and fencepost cutting (grandfathered uses).

WILDLIFE

Nearly all of this WSA is good quality mule deer critical winter range. Generally, mule deer summer at the higher elevations (above 7,800 feet) on the Blue Mountain Plateau and migrate onto this winter range using the K Point/Buckwater Draw and Miners Draw/Dinosaur corridors. A peregrine falcon field survey identified Buckwater Draw and Bull Canyon as potential peregrine falcon habitat. Reintroductions may occur based on future in-depth studies. The field survey also revealed the location of three golden eagle and one great horned owl nest sites.

CULTURAL

No Class III cultural resource inventory has been performed for the Bull Canyon WSA. One prehistoric campsite, 5MF801, has been recorded which covers the top of Plug Hat Rock. This site may not be typical of the WSA since it occupies a distinctive landmark within the area. Local ranchers indicate there are many prehistoric sites in the WSA area, although none have been confirmed. It is likely that this area was heavily used by aboriginal people since it is similar to the Skull Creek area to the east and the Dinosaur area to the north, both of which have been documented as well-utilized habitation and exploitation areas, used particularly by Fremont people.

VISUAL

This area has outstanding scenic values (Quality A Scenic Rating - BLM 1978) and has a high sensitivity rating (BLM 1978) due to the fact that Dinosaur National Monument operates its canyonland access road and two overlooks on the eastern periphery of this unit.

LANDS AND ACCESS

Bull Canyon contains 12,297 acres of public surface and minerals. A 320 acre private surface and mineral estate is located within the WSA. The private land owner and the public have access to the area. Of the 12,297 mineral acres, 7,077 acres are post-FLPMA and 5,220 acres are pre-FLPMA leases for oil and gas.

WILDERNESS

Mandatory Wilderness Characteristics

Of the 12,297 total acres, 11,777 acres are in Colorado, and 520 acres are in Utah (Vernal District BLM). Additionally, 320 acres of private land are located near the center of this unit. The WSA has a block configuration (refer to Map 1-1).

The lands of Bull Canyon are characteristic of the arid canyon ecosystems of northwest Colorado. Pinyon-juniper, sagebrush and native grasses are the main vegetation communities; however, Douglas firs, cottonwoods and willows line the stream beds. Geographically, the area is cut by deep ridges and gullies of sandstone eroded by rain and snowmelt waters. Interesting geology with spectacularly brilliant cliffs and unique rock formations are a result of the deep erosion.

BULL CANYON

The area appears very natural and scenic in character due to the sandstone canyons. Minor imprints of man can be found only in the form of a jeep trail and abandoned reservoir located in Buckwater Draw. Natural revegetation is occurring which is diminishing these intrusions, making the imprint of man's work substantially unnoticeable.

Due to the diverse topography, and dense vegetation of this unit, the opportunities for solitude are considered to be outstanding. On the higher elevations, a visitor may see the vast open space created by the basin, which is accentuated by the scenic backdrop of Cliff Ridge in Utah. This open space, plus the isolation afforded by the numerous canyons, enhances the opportunities for solitude.

Bull Canyon offers outstanding opportunities for primitive recreation such as hiking, backpacking and low impact camping. Bird watching and photography may also occur in the area. Botanical studies of the abundant steppe climate vegetation could be conducted, as well as studies of the relic pinyon-juniper stands known to exist near the Plug Hat Rock picnic area. Opportunities for recording the area's natural beauty are exceptional.

The gradual stream gradients lead out of K Creek, Middle Creek, Buckwater Draw and Bull Canyon offering superb desert hikes. Buckwater Draw is enclosed by striking sandstone cliffs that have many caves and hollows for exploring. Bull Canyon has spectacular cliffs; however, one cannot walk the length of the canyon due to a seventy foot sheer sandstone cliff. This cliff provides nesting for hawks and other birds. Middle Creek also provides easy hikes on the ridge tops as well as along the stream bed. Coyote and deer are presently within the unit where they can be seen in the late evening along hilltops and drainages.

The Bull Canyon area has an abundance of small mammals such as coyotes, badgers, marmots, skunk, white tailed prairie dogs, desert cottontails and Nuttalls cotton-tails. Gray fox and bobcat have been spotted and are known to be in this general location.

Bull Canyon is an excellent large bird habitat. Red tailed hawks, marsh hawks, golden eagles and great horned owls exist within the area. The canyon cliffs and abundance of small rodents makes the area ideal territory for these raptors.

Special Features

The Bull Canyon WSA has a scenic quality rating of 19, out of a possible 33 points, giving it an "A" quality rating. Beautiful, yellow sandstone canyons, varied topography, and green conifers give the area a distinct beauty. Dinosaur National Monument manages a picnic overlook site (Plug Hat Picnic Area) adjacent to this area. The picnic area overlooks this unit and interpretive signs describe the area's geology.

The University of Arizona has made a study of the relic pinyons in the area. They state in part, "The age distribution of these trees has important implications for future tree-ring studies of living pinyons in the area. First, an adequate sample of such old-age would provide the data base for dendrochronological reconstructions of local climate extending more than 600 years back into the past. Second, long range tree-ring chronologies from this area would be valuable additions to our continental and regional tree-ring chronology networks that form the basis for ongoing research into long term climatic variability over the Pacific Ocean and western North America, regional-level analyses of past climatic variability in the southwest, and studies of long term fluctuations in surface runoff in the

CHAPTER III - AFFECTED ENVIRONMENT

Colorado River system. These reconstructions provide a basis for predictions of certain aspects of future climate. Such predictions are of inestimable practical value in planning the future use of land, water, and other resources in the western United States" (Dean and Bowden 1976).

The Dominguez/Escalante Expedition of 1776 reportedly camped within this WSA, near the west-central portion of the unit. The history of the encampment is well documented and recounts that the expedition drew water from a flowing well and hunted buffalo here. The Dominguez/Escalante Trail is being recommended by the National Park Service for designation as a National Historic Trail.

Diversity in the National Wilderness Preservation System

This unit lies in the central part of the Rocky Mountain Forest Province Ecoregion, as identified by R. G. Bailey, USFS, 1976. The Potential Natural Vegetation (PNV) is identified by A. W. Kuchler in his 1966 study as being pinyon-juniper woodland (Pinus edulis and Juniperus utahensis) and sagebrush steppe (Artemisia - Agropyron).

Willow Creek

TOPOGRAPHY

Topography is basically the same as Bull Canyon.

MINERALS

Oil and Gas

The geologic environment of Willow Creek is virtually identical to that described for Bull Canyon. Thirty-three percent of Willow Creek is covered with pre-FLPMA leases. The amount and configuration of these leases is such that oil and gas development potential could be realized at the rate of four wells per section.

The existence of these pre-FLPMA mineral leases presents the possibility of oil and gas exploration. However, because the reserve potential is estimated to be low, only minimal exploration is expected to occur, with little to no production.

Coal

No known coal resources are known to exist in this WSA.

Oil Shale

This area does not have minable quantities of oil shale.

SOILS

The soils of the Willow Creek WSA are similar to those of Bull Canyon. Five soil map units have been identified in this area. They are: Rock outcrop;

Torriorthents - Rock outcrop complex; Massadona - Rock outcrop complex, 5-45 percent slopes; Bankard loamy sand, 1-6 percent slopes; and Almy very fine sandy loam, 3-15 percent slopes.

WATER

The unit contains several water sources in the form of springs and three artesian wells which have considerable flows. Willow Creek, Red Wash, and Stinking Water Creek drain this WSA into the White River.

WILDLIFE

About 75 percent of this WSA is within good quality mule deer critical winter range. Generally, mule deer summer on Moosehead Mountain and migrate to this winter range during late fall. The northern half of this WSA is also used by elk on a year-round basis. Lazy Y Point has been identified as low potential peregrine falcon habitat with reintroduction attempts possibly considered for the future. Raptors commonly nest in the cliffs and rock outcrops here. Five golden eagle and four red-tailed hawk active nests have been identified in this WSA.

CULTURAL

Sites in this area exhibit a similar pattern to those in the Skull Creek WSA. Forty-one sites have been recorded. This WSA has more geomorphological diversity than the Skull Creek WSA and contains a portion of the Blue Mountain uplift as well as the canyon-ridge topography similar to that in the Skull Creek Basin. Fewer granaries have been recorded in this WSA, only 3 as opposed to 13 in the Skull

Creek area, and the percentage of open camp sites and tool stone chipping areas is higher. This may be due in part to geomorphological unity and partially to a different orientation in survey. The survey was concentrated along the Bull Draw and Willow Creek drainages and left unsurveyed other deep canyons with good potential for rock shelters and granaries, such as Box Canyon, Spencer Draw and Red Wash. On the Blue Mountain uplift numerous springs occur and seven of the eight springs which have been examined, have archaeological sites associated with them.

VISUAL

This area has outstanding scenic values ("A" Quality Scenic Rating - BLM 1978). Dinosaur National Monument operates its canyonland access road and one of its overlooks on the western periphery of this unit.

LANDS AND ACCESS

Willow Creek has 13,368 acres of public surface and minerals. The entire area is covered with oil and gas leases. Of these leases 8,976 acres are post-FLPMA and 4,392 acres pre-FLPMA. Public access is available.

WILDERNESS

Mandatory Wilderness Characteristics

The Willow Creek Unit has 13,368 acres. It is dominated by 1,000 foot sandstone cliffs that rise in the north end of the unit. The range in elevation is 5,860 feet to 8,115 feet. The area is mostly covered with pinyon-juniper except a large

CHAPTER III - AFFECTED ENVIRONMENT

natural burn area on the western end of the unit. Some willows and cottonwoods are growing in the drainages. This unit has extremely rugged topography.

The area appears natural with only minor imprints of man in the form of jeep trails. Natural revegetation is occurring on these trails. Overall, the imprint of man's work is substantially unnoticeable. The unit has three artesian wells that are man-made, but these appear natural without close inspection.

The highly dissected terrain provides ample screening and would enable visitors to isolate themselves from others in the unit. Numerous vistas also create a feeling of open space which enhances the feeling of solitude.

The interesting geology, big game wildlife and the supplemented values provide outstanding opportunities for primitive recreation. These include hunting, wildlife viewing, hiking, photography and rock climbing.

Special Features

This area has been studied by a research group from the University of Arizona that has confirmed that some of the pinyon trees approach the maximum size and age for their kind in North America. See also Special Features - Skull Creek in this Chapter.

Diversity in the National Wilderness Preservation System

Willow Creek Unit is within the Rocky Mountain Forest Province Ecoregion. The Potential Natural Vegetation is pinyon-juniper woodland and sagebrush steppe.

Skull Creek

TOPOGRAPHY

Elevations range from 6,000 to 8,000 feet. This mountain area is characterized by rimrock escarpments with sharp, vertical rock cliffs.

MINERALS

Oil and Gas

Twenty-five percent of Skull Creek is covered with pre-FLPMA leases and 75 percent is covered by post-FLPMA leases. Development is considered low as the potential for reserves are low.

Coal and Oil Shale

There is little or no known coal or oil shale.

Uranium

Minor finds of uranium/vanadium minerals are known to exist in the Skull Creek area. Production occurred in the surrounding area until the early 1970s. Total production from the four known operations amounted to 1,961 tons mined, producing 8,738 pounds of Uranium 308 and 12,188 pounds of Vanadium 205. The primary operations, which produced approximately 87 percent of the U308 and 58 percent of the V205, are nearly five miles to the northeast. No production has occurred in the study area. Although several mining

claims border the Skull Creek study area, no claims are known to exist within the area.

SOILS

Four soil mapping units have been identified in the Skull Creek Wilderness Study Area. These units are: Massadona - Rock outcrop complex, 5-45 percent slopes; Rock outcrop; Almy very fine sandy loam, 3-15 percent slopes; and Natrargids, 0-5 percent slopes.

Most of the soils in this area have low potential productivity. These soils are limited by low available moisture and the natrargids are also salt affected.

WATER

The only known sources of surface water in this area are the potholes located in the sandstone canyons. These potholes often hold water throughout the dry summer season. The area is drained by tributaries to the White River. The principal drainages are Miller Creek, Little Red Wash and Red Wash. Groundwater resources are mostly unknown.

WILDLIFE

This entire WSA is within good quality mule deer critical winter range. Generally, mule deer summer on the Skull Creek Rim and migrate into the Skull Creek Basin during late fall. Box Canyon has been identified as low potential peregrine falcon habitat with reintroduction attempts considered for the future. Raptors are common on the cliffs and rock outcrops. Three golden eagle nests have been identified within the area.

CULTURAL

Thirty prehistoric sites have been recorded in this WSA. Of these sites, 13 have components or are exclusively associated with the Fremont time period. Three major tributary canyons of the Skull Creek/Miller Creek drainages have been inventoried and all contain Fremont grain storage cists or granaries. A tributary of Box Canyon also contains granaries. Large habitation sites occur at the mouths of these tributary canyons at the break between the pinyon-juniper slopes and the sagebrush covered alluvial bottom. These sites appear to have a great deal of depth and may have been used extensively over many years. One site, which may be a village, has been vandalized with a bulldozer and reveals a continuous sequence of cultural material throughout the exposed stratigraphy. On the ridge fingers above the tributary canyons are numerous small sites consisting of chipped tool stone and finished tools, indicative of hunting activities.

It appears likely that a relationship exists between the sites in the Skull Creek Basin. Habitation sites, storage sites and tool manufacturing areas appear to occupy distinct niches in the Skull Creek Basin ecosystem. The individual integrity of these sites and their relationship to each other offer an excellent opportunity for studying intersite relationships and subsistence economics. The geomorphological unity of the Skull Creek Basin provides a particularly good visual setting for interpreting archaeological site interrelationships.

VISUAL

This area has characteristic scenery for the region ("B" Quality Scenic Rating - BLM 1978); however, it lies adjacent to

CHAPTER III - AFFECTED ENVIRONMENT

the Skull Creek Rim, which is rated as outstanding scenery ("A" Quality Scenic Rating). The area has a low sensitivity rating due to the fact that most of it can not be seen from any major transportation routes.

LANDS AND ACCESS

Skull Creek contains 13,740 acres of public surface and minerals. Post-FLPMA oil and gas leases cover 9,321 acres and pre-FLPMA 3,509 acres. Public access is available.

WILDERNESS

Mandatory Wilderness Characteristics

The Skull Creek WSA contains 13,740 acres. Minor imprints of man can be found in the form of two jeep trails and the edge of an abandoned drill pad. Natural revegetation is occurring which is diminishing these imprints. The imprints of man's work is unnoticeable and the area appears very natural.

Due to the dense stands of pinyon-juniper trees and the numerous canyons in the unit, the opportunities for solitude are outstanding. The deep, slickrock canyons with their numerous potholes of water, rock art, and nature study opportunities are the recreation focal points of this study area. The dense pinyon stands offer excellent cover for camping.

Opportunities to observe wildlife are plentiful. Two game species: mule deer and grouse, are especially abundant. Non-game species most often observed are Clark's nutcracker, cliff swallows, sparrow hawks, porcupines, ravens, and turkey

vultures. The rock rims and canyon cliffs support several raptor nests and numerous suitable nesting sites. Golden eagles and great horned owls are recorded with fledglings. Evidence of cooper hawks and mountain lions have also been found.

Other species include badgers, marmots, skunk, coyotes and a few bobcats. Numerous cottontails and prairie dogs provide an excellent food source for raptors which include red-tailed and marsh hawks. In addition, over fifty species of song birds have been recorded in this unit.

The Weber sandstone contains a large number of non-vertebrate fossils.

Special Features

The Skull Creek WSA is located within the boundary of the 1976 Skull Creek Environmental Study Area, a 58,626 acre area that was first recognized in 1975 as containing an interesting array of natural history resources.

In 1976 an intensive study was conducted (on file in the White River Resource Area Office, Meeker). The study identified significant aspects of nearly every resource. The Skull Creek Basin serves as a winter refuge for mule deer and mountain lion and has the opportunity to serve as habitat for peregrine falcons found in nearby Dinosaur National Monument. Several unconfirmed sightings of blackfooted ferrets have been recorded but no intensive studies have been made.

A 3 percent archaeological inventory of Skull Creek conducted to date, indicated that the archaeological significance and scientific research potential of the basin is high. cursory inventories of the canyons discovered sites approximately every 400 feet.

The kinds of sites located encompass a full time range from paleo-Indian (8,000 to 10,000 years ago) to historic Ute occupation (to 1880). This is based upon the recovery of artifacts whose dates range from 7,000 B.C. to 1850 A.D. Four sites have been found with sufficient depth and unaltered surface area to provide scientific data. Granaries and one walled rock shelter were located in sandstone faces. A few badly weathered pictographs were found. A single wickiup cluster was found. Portable artifact inventories include points, knives, drills, scrapers, choppers, grinding stones, pottery, and juniper bark matting. Cultural debris included corn cobs, burnt bone, fire-cracked rock, flakes, and tool stone including obsidian.

The Laboratory of Tree Ring Research, University of Arizona conducted a dendrochronological analysis of wood samples from pinyons in the Skull Creek Basin. In a report to the BLM dated December 15, 1976, it was recorded that, "The ages of the Skull Creek pinyons are extraordinary, considering the size of the sample. Three of the six trees sampled approach the maximum known age class for the species. The age distribution of these trees have important implications for future tree ring studies of living pinyons in the area. An adequate sample of such old age would provide the data base for dendrochronological reconstructions of local climate extending more than 600 years."

Diversity in the National Wilderness Preservation System

The Skull Creek unit is within the Rocky Mountain Forest Province Ecoregion. The Potential Natural Vegetation is pinyon-juniper woodland and sagebrush steppe.

Black Mountain

TOPOGRAPHY

The area is in the southwestern portion of the Danforth Hills. This area is characterized by mesas descending from the White River Plateau region located to the east.

MINERALS

Oil and Gas

The U.S. Geological Survey has estimated that the energy and critical mineral resource values in this WSA have a moderate to high potential for development. The geologic environment is very favorable for discovery of oil and gas fields since it is located in areas of known reservoir rocks, hydrocarbon source beds, and potential stratigraphic and structural traps.

The study area is located in close proximity to three oil and gas fields: Wilson Creek Field, Powell Park Field, and the White River Field. The westerly one-third of this WSA is within a producing Federal oil and gas unit. A well located in Section 32 has been shut-in while awaiting pipeline hookup.

Production zones of the White River Field are from the Wasatch and Mesa Verde formations which possibly underlie the WSA. According to a structural contour map of the Dakota sandstone (Tweto 1979), the WSA sits on the southeastern front of a dome and the White River Field is perched



Black Mountain



Windy Gulch



Oil Spring Mountain

atop the central portion. Industry has already taken steps to obtain oil and gas leases or permits to drill in the Windy Gulch and Black Mountain WSAs. Existing gas pipelines adjacent to the units handle present needs for product transportation. As production in the gas field increases, additional pipelines may be required.

Fifty-three percent of the Black Mountain WSA is covered with pre-FLPMA leases. These leases could be developed even if the area were designated wilderness. This fact coupled with the high oil and gas reserve potential, and historic regional development, indicate imminent oil and gas development.

Coal

The Black Mountain area was not identified in the USGS 1973 report on Known Recoverable Coal Resource Areas (KRCRAs). These are defined as Federal land which meets minimum standards for recoverable coal deposits with acceptable methods of recoverability. The Conservation Division of the USGS, in a recent review of the Black Mountain Area confirmed this by stating that the coal development potential is low.

Oil Shale

The USGS has recently completed classification for oil shale lands in Colorado (USGS, 1981). Their classification resulted in two categories: oil lease areas and prospectively valuable oil shale lands. The lands identified as "prospectively valuable" are low priority lands for oil shale development compared to the oil shale leasing areas in the nearby Piceance Basin. In Black Mountain WSA, 9,452 acres, or 95 percent of the study area has been classified by USGS as lands prospectively valuable for oil shale.

SOILS

Four soil associations have been identified in this area. They are the Glendive-Kobar-Havre association, the Rentsac-Moyerson-Rock outcrop association, the Forelle-Zoltany-Work association and the Castner-Veatch-Red Creek association.

The Glendive-Kobar-Havre association and the Forelle-Zoltany-Work association are fairly productive soils. The productivity of the other soils is limited by low available moisture and high natural erosion rates.

WATER

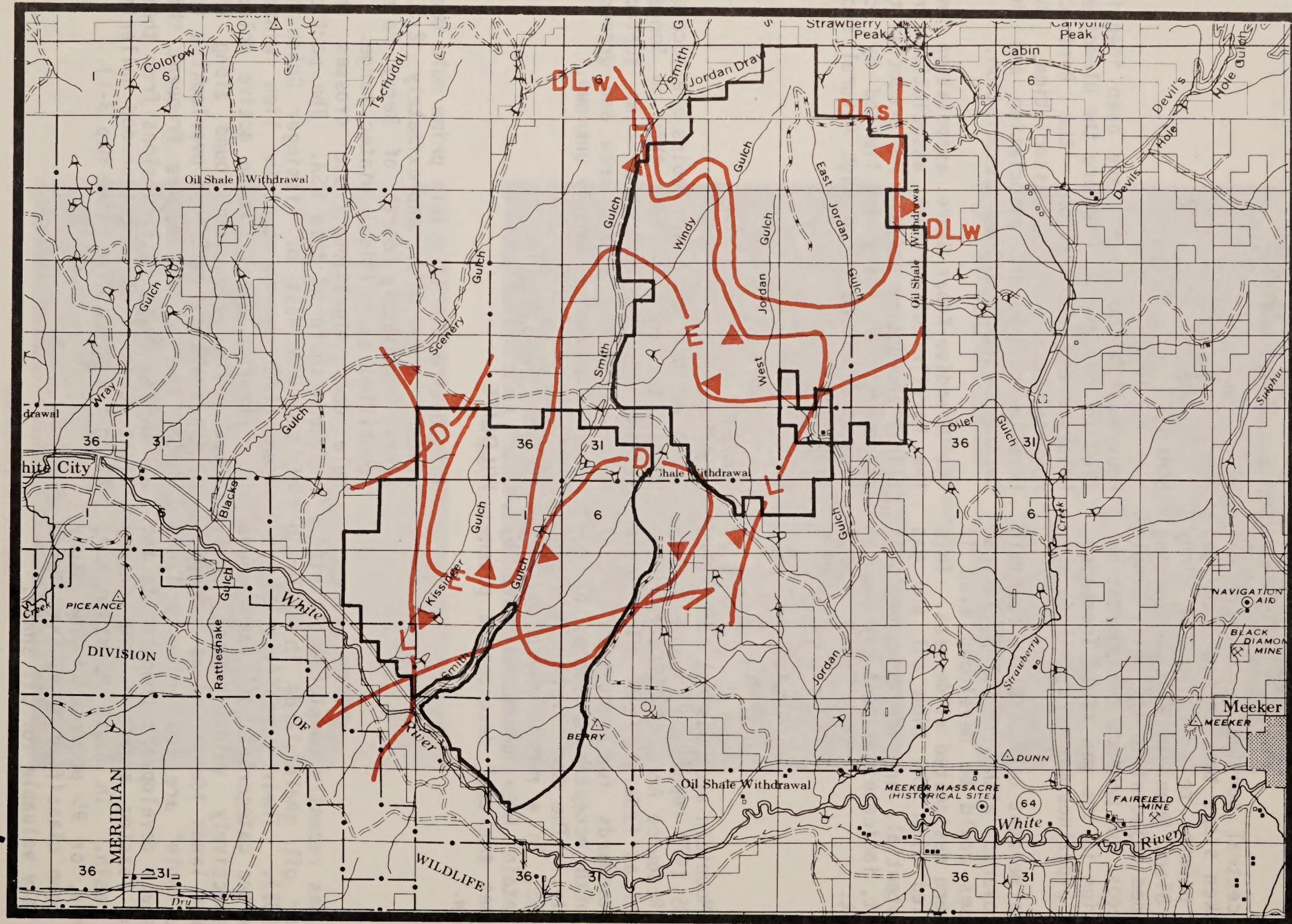
Six livestock water reservoirs are located within the area, however they no longer retain water year around. No surface water is known in this area and ground-water resources are mostly unknown.

WILDLIFE

This entire WSA is within prime mule deer winter range with approximately 2,100 acres immediately north of Berry Point identified as critical winter range. A mule deer migration route crosses the southern third of this WSA. The portion of the WSA east of Kissinger Gulch is identified as a mountain lion winter concentration area. Three active golden eagle nests have been found along the cliffs and rocky outcrops overlooking the White River. Bald eagles frequent this WSA during foraging excursions from their night roost sites in cottonwood galleries along the White River (see Map 3-1).

Map 3-1 - Black Mountain and Windy Gulch - Wildlife

58



0 1 2 3 4 5 Miles

Map 9

▲ DLs

MULE DEER AND MOUNTAIN LION SUMMER RANGE

▼ DLw

MULE DEER AND MOUNTAIN LION WINTER AREA



D- MULE DEER CRITICAL WINTER RANGE

E- ELK WINTER RANGE

L- MOUNTAIN LION CONCENTRATION AREA

MULE DEER MIGRATION ROUTE

CULTURAL

One prehistoric campsite is located on the southern periphery of this WSA. This site was located during the same survey and in the same topographic context as the sites within the Windy Gulch WSA. For further discussion of cultural resources see: Chapter III - Affected Environment - Windy Gulch. No other survey except a half-mile linear survey on the southern boundary has been performed, therefore, further evaluation of the cultural resources within this WSA is not possible.

VISUAL

This area has minimal scenic values ("C" Quality Scenic Rating - BLM 1978) and has a low sensitivity rating because little of it can be seen from any major transportation route.

LANDS AND ACCESS

The Black Mountain WSA contains 9,932 acres of public surface and minerals. Public access to this unit is available. The entire unit is covered with oil and gas leases. Of these leases, 4,690 acres are post-FLPMA and 5,242 are pre-FLPMA.

WILDERNESS

Mandatory Wilderness Characteristics

The Black Mountain WSA contains 9,932 acres. The imprints of man in the unit are substantially unnoticeable. They include remnants of six reservoirs in Kissinger

Gulch that were constructed over 20 years ago. The reservoirs have not been maintained and are naturally revegetating. The upper end of Smith Gulch and its major eastern side drainage contains trails that are used primarily by cattle.

Black Mountain, Kissinger Gulch, Smith Gulch and several side drainages provide numerous opportunities for solitude. The high ridge tops provide vistas which can enhance a feeling of solitude. The numerous steep-sided drainages and dense vegetation enable visitors to isolate themselves from others while in the unit. The highly dissected terrain and dense vegetation give this unit ample screening potential resulting in outstanding opportunities for solitude.

Historically, big game hunting (primarily mule deer) has been the major recreational activity in the unit. Hunting and associated activities (camping, hiking, etc.) would continue to be the major primitive recreational opportunities. While opportunities for primitive and unconfined recreation do exist, they are not considered to be exceptional.

Special Features

No special features were identified in this wilderness study area.

Diversity in the National Wilderness Preservation System

This unit lies in the central part of the Rocky Mountain Forest Province Ecoregion, as identified by R. G. Bailey, USFS, 1976. The Potential Natural Vegetation is identified by A. W. Kuchler in his 1966 study as being pinyon-juniper woodland (Pinus edulis and Juniperus utahensis).

CHAPTER III - AFFECTED ENVIRONMENT

Windy Gulch

TOPOGRAPHY

Topography is basically the same as described for Black Mountain.

MINERALS

Oil and Gas

Geological conditions in Windy Gulch are identical to those described for Black Mountain. Oil and gas potential is moderate to high. Seventy-three percent of Windy Gulch is covered with pre-FLPMA leases. This fact coupled with its estimated high oil and gas reserve potential, and recent increased exploration/development indicate imminent oil and gas development.

Coal

Coal potential is very low (see description under Black Mountain).

Oil Shale

Oil shale potential for Windy Gulch is the same as that for Black Mountain except that acreages and percentages differ. Windy Gulch has 12,405 acres or 88 percent of the study area which is "prospectively" valuable for oil shale.

SOILS

The soils of the Windy Gulch Wilderness Study Area are similar to those described for the Black Mountain Wilderness Study Area

WATER

No known surface water exists in this area. Few groundwater resources are known. The study area is drained by tributaries of the White River. The principal drainage for Windy Gulch are Smith and Jordan Creeks.

WILDLIFE

The upper elevation mountain-shrub community provides summer range for mule deer; the lower elevation mountain shrub and pinyon-juniper habitats provide winter range. Small populations of elk winter in the northern two-thirds of this WSA. A lion population inhabits this area with seasonal movements similar to mule deer--the lion's main prey species. No threatened or endangered wildlife species have been observed, reside, or receive essential benefit from this area (see map 3-1).

CULTURAL

A linear survey approximately three miles in length follows the southern boundary of the WSA. Three prehistoric open campsites were located during this survey. All are at the contact between the pinyon-juniper zone and the sagebrush terraces on the north side of the White River. No other survey has been performed for this area. Cultural resources are probably located in the heart of the WSA since the campsites

on the periphery were undoubtedly located to take advantage of both the riverine environment and the pinyon-juniper zone within the WSA. One of these campsites appears to have subsurface components and may have more than one occupation. This site was disturbed by the roadcut of Colorado Highway 64. The implications of having a multi-component site located on the edge of the WSA are that there was a particularly favorable resource base located within the WSA which was being exploited prehistorically.

VISUAL

This area has minimal scenic values ("C" Quality Scenic Rating - BLM 1978) and has a low sensitivity rating because little of the area can be seen from any major transportation route.

LANDS AND ACCESS

Windy Gulch contains 12,274 acres of public surface and minerals. Oil and gas leases cover the entire area; 3,438 acres are post-FLPMA and 8,836 acres are pre-FLPMA. Public access is primarily from the western boundary. No legal vehicular access exists to the boundary. Private lands almost completely surround the unit.

WILDERNESS

Mandatory Wilderness Characteristics

The Windy Gulch WSA contains 12,274 acres. The imprints of man in this unit are mostly unnoticeable. Some evidence of horse trails and abandoned jeep trails can be found. These traces are becoming overgrown and the area generally appears very natural.

Outstanding opportunities for solitude are present due to ample topographic and vegetative screening. The numerous draws and dense vegetation provide visitors the opportunity to isolate themselves while in the unit. The high ridgetops provide numerous vistas which can enhance a feeling of solitude. The large size and blocked land configuration provide ample room for individuals to disperse themselves within the unit.

Historically, big game hunting (mule deer and elk) has been the major recreational activity in the unit. Hunting and associated activities (camping, hiking, etc.) would continue to be the major primitive recreational opportunity in the unit. There are no supplemental values or other features which enhance the recreational opportunities or make them unique in a regional context. While opportunities for primitive and unconfined recreation do exist, they are not considered outstanding.

Special Features

The Windy Gulch study area has no special features.

Diversity in the National Wilderness Preservation System

Windy Gulch is of the same ecosystem as Bull Canyon. This unit lies in the central part of the Rocky Mountain Forest Province Ecoregion, as identified by R. G. Bailey, USFS, 1976. The Potential Natural Vegetation (PNV) is identified by A. W. Kuchler in his 1966 study as being juniper-pinyon woodland (Juniperus utahensis and Pinus edulis).

Oil Spring Mountain

TOPOGRAPHY

Topography is basically the same as Black Mountain.

MINERALS

Oil and Gas

Oil Spring Mountain is comprised primarily of the Green River formation, generally a dark gray shale and marlstone. Gas and oil is found in the associated basal sandstone section of the Green River formation.

The U.S. Geological Survey has estimated that the energy resource values in the Oil Spring Mountain WSA have a high potential for development. The geologic environment is highly favorable for discovery of natural gas fields. The area is surrounded by established production and has the potential for economic accumulations of natural gas in stratigraphic or structural traps.

An estimate of the potential natural gas reserves contained within the Oil Spring Mountain WSA indicate the possibility of approximately 34 billion cubic feet of gas. Oil reserve potential is considered insignificant.

Oil exploration in the general region about Oil Spring Mountain began in 1943 with the discovery of the Douglas Creek field. There are presently 25 pre-FLPMA oil and gas leases totaling 12,180 acres. This fact coupled with its estimated high gas reserve potential and recent increased development indicate imminent gas develop-

ment (see Map 3-2 for well locations). Presently there are three producing gas wells within the area on pre-FLPMA leases.

Coal

Coal potential is low. For further discussion see Black Mountain.

Oil Shale

In the Oil Spring Mountain WSA, 6,880 acres, or 39 percent of the study area has been classified by USGS as lands prospectively valuable for oil shale. The lands identified as "prospectively valuable" are low priority oil shale lands in comparison to the leasing areas in the Piceance Basin. No commercial value has been established for these lands.

SOILS

Four soil associations have been identified in this area. They are the Glendive-Kobar-Havre association, the Rentsac-Moyerson-Rock Outcrop association. The Castner-Veatch-Red Creek association and the Iriqul-Parachute-Rhone association.

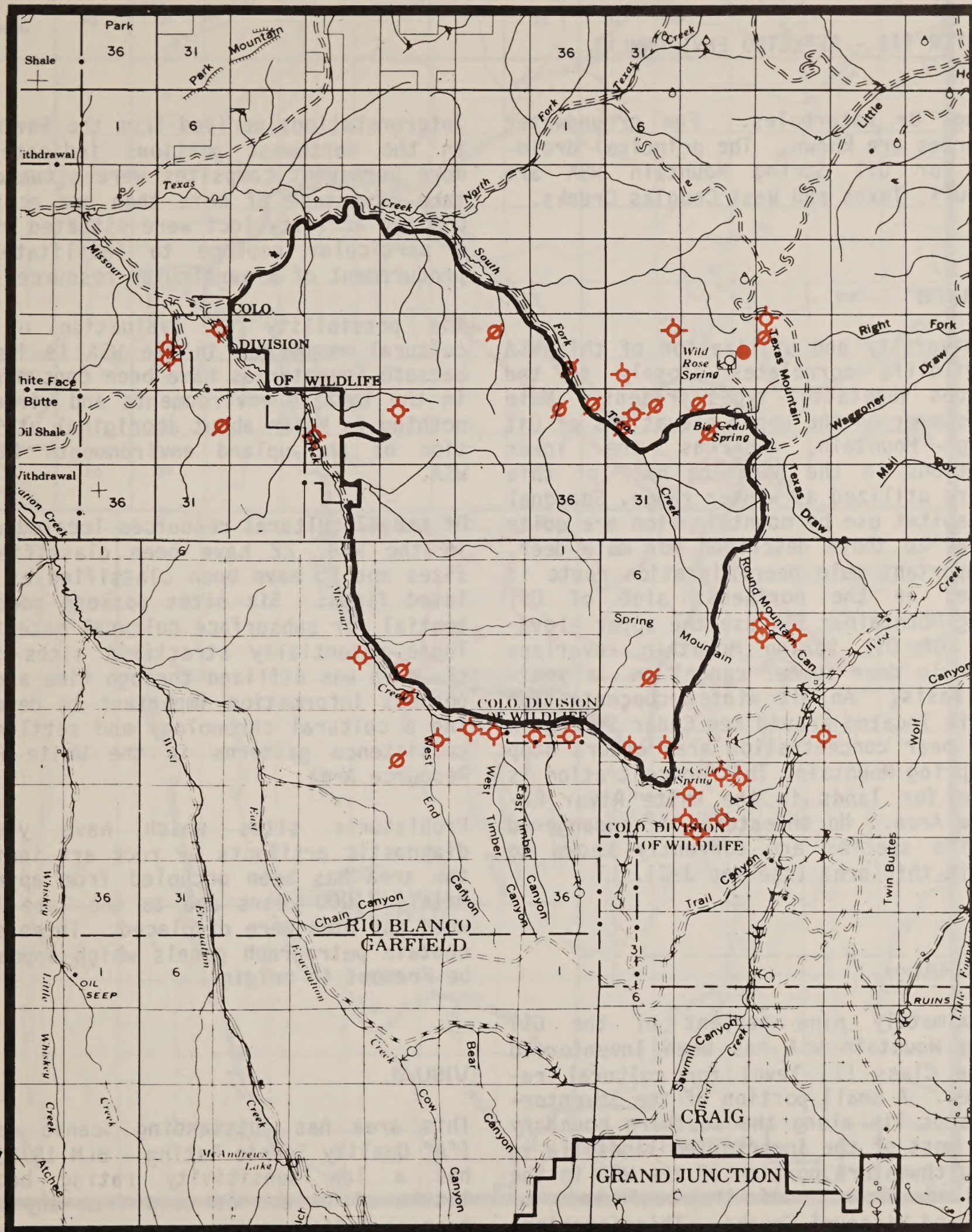
The Glendive-Kobar-Havre association and the Iriqul-Parachute-Rhone association are relatively productive soils. The productivity of the other sils is limited by low available moisture and high natural erosion rates.

WATER

There are five known surface water sources in or adjacent to the WSA boundary with a likelihood of several more undeveloped

CRAIG

2



- ⊗ Producing Gas Well
- Producing Oil Well
- ⊘ Dry Hole

Map 3-2 - Oil Spring Mountain - Oil and Gas Wells

CHAPTER III - AFFECTED ENVIRONMENT

springs or waterholes. Few groundwater resources are known. The principal drainages for Oil Spring Mountain WSA are Missouri, Texas and West Couglas Creeks.

WILDLIFE

The diversity and utilization of this WSA by wildlife correlates closely to the numerous vegetation types present. Mule deer summer on the upper elevations of Oil Spring Mountain, whereas the lower elevations in the northern half of this WSA are utilized as winter range. Seasonal and habitat use by mountain lion are quite similar to those described for mule deer. An important mule deer migration route is located on the northeast side of Oil Spring Mountain. Elk use the upper elevations of Oil Spring Mountain (overlaps with mule deer summer range) on a year-long basis. An elk winter concentration area is located around Red Cedar Spring. A black bear concentration area occurs atop Oil Spring Mountain. This concentration is unique for lands in the White River Resource Area. No threatened or endangered wildlife species are currently known to inhabit this area (see Map 3-3).

CULTURAL

Approximately nine percent of the Oil Spring Mountain WSA has been inventoried at the Class III level for cultural resources. A small portion of the inventoried lands lie along the southern boundary while most of the inventoried lands lie in the northwestern portion of the WSA in the low land vicinity of the confluence of Texas and Missouri Creeks. This inventory yields a prehistoric site density of one site per 32 acres, which is the highest known cultural resource density in the White River Resource Area.

Interpretations derived from the inventory in the northwest portions indicate the more permanent campsites were situated to take advantage of more than one ecotone. Limited activity loci were situated within a particular ecotone to facilitate the procurement of a particular resource.

The possibility of evaluation of the cultural resources in the WSA is limited because inventories have been concentrated in the lowland environments and virtually nothing is known about aboriginal utilization of the upland environments in the WSA.

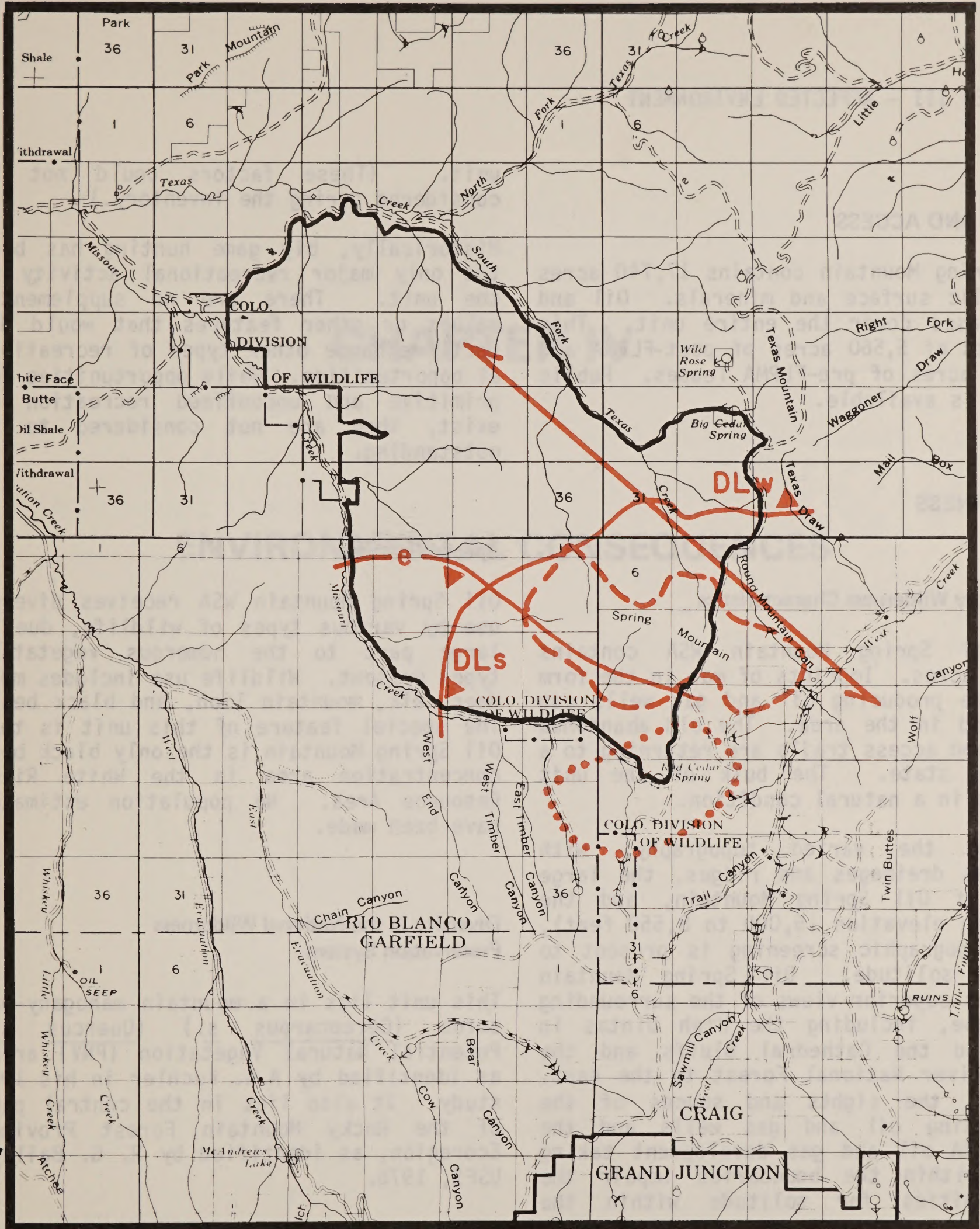
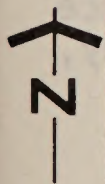
Of the 47 cultural resources located within the WSA, 22 have been classified as sites and 25 have been classified as isolated finds. Six sites possess good potential for subsurface cultural materials. These potentially stratified sites imply the area was utilized through time and may possess information important to developing a cultural chronology and settlement/subsistence patterns in the White River Resource Area.

Prehistoric sites which have yielded diagnostic artifacts or rock art indicate the area has been occupied from approximately 7,000 years ago to the late 1870s when the Utes were displaced. Three sites contain petrograph panels which appear to be Fremont in origin.

VISUAL

This area has outstanding scenic values ("A" Quality Scenic Rating - BLM 1978) but has a low sensitivity rating because little of it can be seen from any major transportation route.

CRAIG



- DLs** MULE DEER AND MOUNTAIN LION SUMMER RANGE
- DLw** MULE DEER AND MOUNTAIN LION WINTER AREA
- e** ELK OVERALL DISTRIBUTION
- ELK CRITICAL WINTER RANGE
- BLACK BEAR CONCENTRATION AREA
- MULE DEER MIGRATION ROUTE

Map 3-3 - Oil Spring Mountain - Wildlife

CHAPTER III - AFFECTED ENVIRONMENT

LANDS AND ACCESS

Oil Spring Mountain contains 17,740 acres of public surface and minerals. Oil and gas leases cover the entire unit. This consists of 5,560 acres of post-FLPMA and 12,180 acres of pre-FLPMA leases. Public access is available.

WILDERNESS

Mandatory Wilderness Characteristics

The Oil Spring Mountain WSA contains 17,740 acres. Imprints of man in the form of three producing oil and gas wells can be found in the area. The old abandoned wells and access trails are returning to a natural state. The bulk of the unit remains in a natural condition.

Due to the varied topography, with numerous drainages and ridges, the large ridge of Oil Spring Mountain, and the range in elevation (6,000 to 8,550 feet), some topographic screening is present to provide solitude. Oil Spring Mountain provides superior views of the surrounding landscape, including the High Uintas in Utah and the Cathedral Bluffs and the White River National Forest to the east. However, the sights and sounds of the surrounding oil and gas wells and the pre-FLPMA oil and gas development taking place within the boundaries impair the opportunities for solitude within the

unit. (These factors could not be considered during the inventory.)

Historically, big game hunting has been the only major recreational activity in the unit. There are no supplemental values or other features that would directly enhance other types of recreational opportunities. While opportunities for primitive and unconfined recreation do exist, they are not considered to be outstanding.

Special Features

Oil Spring Mountain WSA receives diverse use by various types of wildlife, due in large part to the numerous vegetation types present. Wildlife use includes mule deer, elk, mountain lion, and black bear. The special feature of this unit is that Oil Spring Mountain is the only black bear concentration area in the White River Resource Area. No population estimates have been made.

Diversity in the National Wilderness Preservation System

This unit lies in a mountain mahogany-oak scrub (*Cercocarpus* s.) (*Quercus* s.) Potential Natural Vegetation (PNV) area, as identified by A.W. Kuchler in his 1966 study. It also lies in the central part of the Rocky Mountain Forest Province Ecoregion, as identified by R. G. Bailey, USFS, 1976.

CHAPTER IV

ENVIRONMENTAL CONSEQUENCES

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ENVIRONMENTAL CONSEQUENCES

GENERAL IMPACTS

Air Quality

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ENVIRONMENTAL CONSEQUENCES

CHAPTER IV

ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the impacts of the three alternatives on the resource values discussed in Chapter III - "Affected Environment". Each WSA is treated separately. When impacts to a resource are the same under all alternatives for all WSAs, these resources are treated under the "General Impacts" section discussed below. Impacts under the Boundary Adjustment (Partial Wilderness) Alternative are analyzed for the Bull Canyon WSA only.

ASSUMPTIONS FOR ANALYSIS

1. Little, if any, development is expected in the three Moffat County WSAs. The 1981 White River Management Framework Plan indicated little potential for intensive resource development, including forestry, recreation or minerals. In addition, the U.S. Geological Survey (USGS) Office in Denver made a preliminary minerals assessment for all the WSAs and estimated that Bull Canyon, Willow Creek and Skull Creek have low potential for minerals. Industry also rates these three units as having low to moderate oil and gas potential. Except for some grazing and hunting no other uses are anticipated, whether these areas are designated wilderness or not. For the foreseeable future, their wilderness characteristics would probably be in place under any of the alternatives.

2. Extensive oil and gas development will occur in the three Rio Blanco County WSAs. The Black Mountain, Windy Gulch and Oil Spring Mountain WSAs have high potential for discovery of oil and gas deposits over all their lands based on geologic assessments from both BLM and USGS geologists. All three areas have numerous pre-FLPMA leases, which are valid existing rights which will be exercised, regardless of designation. Moderate to high interest has been expressed by the oil and gas

industry to develop the Rio Blanco County areas, especially Oil Spring Mountain. Several Applications for Permit to Drill (APDs) have been approved by the Minerals Management Service to drill within the area's boundary. All three areas have developed oil and gas fields nearby. Overall, exploratory drilling in northwest Colorado has increased substantially in the past several years.

3. All six WSAs are relatively small, and even minimal oil and gas development would degrade their wilderness characteristics to the point where they would be significantly impaired.

4. If an area is designated wilderness, the BLM Wilderness Management Policy would be the guide to those activities which would be permissible in that area.

5. If an area is not designated wilderness, it would be managed in accordance with the 1981 White River Resource Area MFP.

GENERAL IMPACTS

The following resources would incur similar impacts in each WSA.

Air Quality

If the various WSAs are not designated wilderness, the air quality would probably not deteriorate below Class II. Concern has been expressed that air quality standards may become more stringent if wilderness designation occurs. The Department of the Interior would not recommend reclassification to the more strict Class I Air Quality classification in connection with future wilderness recommendations resulting from the BLM wilderness review.

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The two processes are separate and distinct and are accomplished under two different laws: FLPMA and the Clean Air Act. Recommendations for wilderness designation are made by BLM through the Secretary of the Interior and the President to Congress. Air quality reclassification is the prerogative of the states and must follow a process mandated by the Clean Air Act Amendments of 1977, involving a study of health, environmental, economic, social, and energy effects; a public hearing; and a report to the Environmental Protection Agency.

Soils

Impacts to soils would be the result of other resource actions permitted if the area is not designated wilderness. Based on the existing MFP, the soils in each of the areas would not be significantly impacted if the area is managed as nonwilderness. Site specific analysis to determine impacts would be done at the time a project is proposed.

Water

Impacts to water would be the result of other resource actions permitted if the area is not designated wilderness. Based on the existing MFP, the water resources in each of the areas would not be significantly impacted if the areas are managed as nonwilderness. Site specific analysis to determine impacts would be done at the time a project is proposed.

Livestock Grazing

The Wilderness Act and BLM's Wilderness Management Policy allow the grazing of

livestock, where established prior to the designation of an area as wilderness, to continue subject to certain limitations. Existing grazing may include not only the utilization of the forage resource, but also the use and maintenance of livestock management improvements and facilities that were in existence when the area was designated wilderness. Because of these provisions, there would be no significant impact to existing livestock operations under the All Wilderness alternative. However, due to limitations on types of new improvements (e.g. vegetative manipulations) and the cost of mitigation, the potential of the rangeland in the WSA's, as identified in the White River Resource Area's recently completed Rangeland Management Program, may not be realized under the All Wilderness alternative. This again would not be a significant impact because the amount of potential AUMs lost would be small (less than 900 AUMs for all six WSAs).

Under the No Wilderness alternative, new rangeland improvement projects would be implemented to reach the identified grazing potential. These improvements would represent minor degradation of wilderness characteristics; therefore, the impacts of the rangeland management program under the No Wilderness alternative are not significant.

The impacts to livestock grazing under the Boundary Adjustment (Partial Wilderness) alternative are the same as the All Wilderness alternative.

Cultural

The All Wilderness Alternative could have a minimum impact to cultural resources within the WSAs as a result of increased visitor use resulting from designation. While there is not expected to be a significant increase in visitor use, it could

result in increased vandalism to cultural sites which were previously protected by virtue of their isolation. Overall, there would be a slight beneficial impact to cultural resources as a result of this designation, because fewer acres would be developed for energy than under the No Wilderness alternative.

Under the No Wilderness alternative a slight adverse impact to cultural resources could occur because energy development would continue unrestricted.

Recreation

While it is noted that, historically, wilderness designation has significantly increased recreation use on national forest and park lands, designation of these six WSAs would not have the same degree of effect. In the past, the lands that have been designated wilderness have possessed popular outdoor recreation characteristics such as tall conifers, alpine lakes and trout-filled streams, and received moderate amounts of recreational use before designation. Wilderness designation gave national attention to these lands and the recreational use often increased dramatically.

In the case of Bull Canyon (and the other White River WSA's for the most part), the potential primitive recreation opportunities are outstanding, and include mule deer and grouse hunting, or hiking and nature study; however, the recreation characteristics are not the most popular types. For example, the most comfortable temperatures are not during the summer, when most vacations occur, but during the spring and fall. The trees are pinyon and juniper, which average only 15 to 20 feet in height. Water is scarce, in the form of spring-fed streams, and without game fish and many dry-up during the summer months.

Transportation

There are no known proposed transportation routes or corridors within any of the WSAs. As such the impacts on transportation systems from implementation of any of the alternatives would be insignificant.

RESOURCES CONSIDERED BUT NOT AFFECTED

Discussions on climate, geology and topography are included in Chapter III "Affected Environment" because they help to present a more comprehensive picture of the study areas. Since there would be no impact to these three resources under any alternative, they will not be discussed further in this chapter. The alternatives studied are not expected to impact known threatened or endangered plant or animal species, alluvial valleys, prime or unique farmlands, or noise levels in the six WSAs. Therefore, these resources do not warrant any further discussion in this chapter.

ALL WILDERNESS ALTERNATIVE

Bull Canyon

Minerals

According to preliminary geologic reports, the potential for discovery of oil or gas, or other minerals in economic quantities is low. Energy developers were asked to respond to a survey regarding interest in development of this area. Low to moderate interest to develop was expressed.

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A major emphasis has been placed on oil and gas leases with valid and existing rights (pre-FLPMA) within these WSAs. In a recent court decision (Rocky Mountain Oil and Gas Association vs. Andrus, Civ. Re. 78-265, D. Wyo., 1980) it was held that mineral leases issued prior to the passage of the Federal Land Policy and Management Act of 1976 (FLPMA) are not subject to the nonimpairment standards of Section 603(c) of that act. Therefore, pre-FLPMA mineral leases are considered valid existing rights, allowing development, regardless of wilderness designation.

It should be noted that the entire study area is covered with oil and gas leases and of these, 42 percent, or 5,220 acres are leases with valid existing development rights, which could be developed regardless of wilderness designation. Fifty-eight percent of the area, which is under post-FLPMA leases would not be developed. The existence of these leases does not indicate future development, by any means. These leases are often purchased merely for speculation.

The probability of wilderness designation adversely impacting future mineral development is low, because firstly, the potential for reserves is low, and secondly, 42 percent of the area can still be developed under valid existing rights.

Forestry

Wilderness designation would prohibit commercial forest product harvest. Therefore any potential opportunity for forest/woodland management would be lost. A tract of approximately 200-300 acres in the central portion of the WSA has been identified as a potential commercial fencepost sale area. However, when compared to the

availability of wood products elsewhere in the Resource Area, this impact is not significant.

Wildlife

The wildlife resource would benefit to a small degree from designation of this unit as a wilderness area. Wilderness management regulations would minimize the major adverse impacts of human encroachment from increased vehicular access, and destruction of habitats associated with oil and gas exploration and development should it occur in this area of low development potential. These regulations would contribute to maintenance of quality habitat and ensure long term optional use of this area by wildlife.

Visitor use would increase under wilderness designation. However, this encroachment would occur mainly during the summer months and impacts to the wintering deer herd are not expected. The steeply dissected terrain would limit visitor use around the raptor nesting areas therefore only minimal impacts are expected.

Visual

With wilderness designation, the Bull Canyon Scenic Area would be managed under Class I Visual Resource Management (VRM) guidelines, which is the maximum protection afforded scenic areas that have been designated as either wilderness or natural areas. This action would ensure protection of the area's scenic quality and the viewing opportunities from both the Escalante and Plug Hat Scenic Overlooks, located along the Dinosaur National Monument access road.

ALL WILDERNESS ALTERNATIVE

Recreation

The study area receives little recreational use and only by those that enjoy high desert lands environment. Therefore, it is assumed that wilderness designation will only attract those same types of users so the numbers would remain relatively small.

Lands and Access

Three hundred twenty acres of land near the center of the Bull Canyon unit are privately owned and are used as part of a private cattle grazing operation. This tract is undeveloped and indistinguishable from the public lands. Under this alternative, the landowner could continue this grazing operation and would not be subject to access restrictions. Wilderness designation would adversely impact the value of the 320 acres if development was the intention. Conversely, land values could be beneficially impacted if buyers were interested in wilderness uses.

Social

No significant social impacts would occur with designation of this WSA as wilderness.

Economics

Wilderness designation would not preclude any existing, planned, or anticipated uses of the land within or near this study

area. The current uses of livestock grazing and hunting would continue.

Some of the businesses in nearby Dinosaur, Colorado may receive some increased retail trade from the increase in wilderness visitors. The estimated effects upon the economies of either Dinosaur or Moffat County would be insignificant.

Wilderness

Bull Canyon's wilderness characteristics, which include naturalness and outstanding opportunities for solitude and primitive recreation, would be protected under the authority of the 1964 Wilderness Act and BLM's Wilderness Management Policy, if designated as wilderness. Adding Bull Canyon to the National Wilderness Preservation System (NWPS) would constitute a beneficial impact because of the diversity that the area would add to the system.

Willow Creek

Minerals

The Willow Creek study area has 4,392 acres of valid existing mineral rights leases which covers 33 percent of the WSA. There would not be an adverse impact to mineral development from designating this unit as wilderness since the pre-FLPMA leases could still be developed. Designation would prevent the development of 67 percent of the area currently held under post-FLPMA leases. Since current interest in development of this area by energy developers is low, the presence of leases do not necessarily indicate the probability of development.

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

Forestry

Wilderness designation would prohibit any commercial forest product harvest. Any potential opportunity for forest/woodland management would be lost; however, this potential is low and the impact would not be significant.

Wildlife

The wildlife resource would benefit to a small degree from designation of this site as a wilderness area. Wilderness management regulations would minimize the major adverse impacts of human encroachment from increased vehicular access, and destruction of habitats associated with oil and gas exploration and development should it occur in this area of low development potential. These regulations would contribute to maintenance of quality habitat and ensure long term optional use of this area by wildlife.

Visual

Approximately two-thirds of the Willow Creek WSA has high scenic qualities ("A" Quality VRM). If designated as wilderness, the study area would be managed under Class I Visual Resource Management guidelines, which is the strictest management class for visual resources. This would be a beneficial impact to visual resources.

Recreation

This area receives little recreational use and designation as wilderness is not anticipated to significantly increase visitor use. Therefore, the recreational

resource would not incur significant impacts under this alternative.

Lands and Access

The main access to Willow Creek is directly off the Dinosaur National Monument Road, on the western part of the unit. No impacts are expected under this alternative.

Social

No significant social impacts would occur with designation of this WSA as wilderness.

Economics

Wilderness designation would not preclude any existing, planned, or anticipated uses of the land within or near this study area. The current uses of livestock grazing and hunting would continue.

Some of the businesses in nearby Dinosaur, Colorado may receive some increased retail trade from the increase in wilderness visitors. The estimated effects upon the economies of either Dinosaur or Moffat County would be insignificant.

Wilderness

While wilderness designation would theoretically protect Willow Creek's wilderness characteristics, the actual management to achieve that protection would prove to be extremely difficult. The reason being that the boundaries follow administrative lines, such as private lands, and not easily definable physical features (see Chapter II, Alternatives

Considered but Eliminated - Boundary Adjustment alternative for Willow Creek).

Skull Creek

Minerals

Although 75 percent of the area would be excluded from mineral, oil, and gas development because of post-FLPMA leases, the probability of wilderness designation adversely impacting future mineral development is low, since the potential for reserves is low.

Forestry

Wilderness designation would prohibit any commercial forest product harvest. Any potential opportunity for forest/woodland management would be lost; however, this potential is low and the impact would not be significant.

Wildlife

The wildlife resource would benefit to a small degree from designation of this site as a wilderness area. Wilderness management regulations would minimize the major adverse impacts of human encroachment from increased vehicular access, and destruction of habitats associated with oil and gas exploration and development should it occur in this area of low development potential. These regulations would contribute to maintenance of quality habitat and ensure long term optional use of this area by wildlife.

Visual

If designated as wilderness, Skull Creek could be managed under Class I VRM guidelines, offering maximum protection for its visual resources. However, this degree of protection is not felt to be necessary since this study is rated as "B" Quality scenery, with a low sensitivity rating, which simply means that the area cannot be seen from any major transportation route. Visual resources would not significantly benefit from wilderness designation.

Recreation

This area receives little recreational use and designation as wilderness is not anticipated to significantly increase visitor use. Therefore, the recreation resource would not be significantly impacted under this alternative.

Lands and Access

The alternative would not have a significant effect upon the lands and access to Skull Creek. The main access to Skull Creek is County Road #95 off U.S. 40, by the community of Skull Creek. It should be pointed out that local residents are apprehensive about the general public using this access route "through" their private lands, but the road does allow legal access.

Social

No significant social impacts would occur with designation of this WSA as wilderness.

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

Economics

Wilderness designation would not preclude any existing, planned, or anticipated uses of the land within or near this study area. The current uses of livestock grazing and hunting would continue.

Some of the businesses in nearby Dinosaur, Colorado may stand to receive some increased retail trade from the increase in wilderness visitors. The estimated effects upon the economies of either Dinosaur or Moffat County would be insignificant.

Wilderness

While wilderness designation would theoretically protect Skull Creek's wilderness characteristics, the actual management to achieve that protection would prove to be extremely difficult, if at all possible. The reason being that the boundaries follow administrative lines, such as private lands and roads, and not easily definable physical features (see Chapter II, Alternatives Considered but Eliminated - Boundary Adjustment Alternative for Willow Creek).

Black Mountain

Minerals

According to preliminary geologic reports, the potential for economic discovery of oil and gas (mostly natural gas) reserves is moderate to high. This fact, in combination with the fact that approximately 53 percent of the unit's lands are covered with valid existing development rights, give reason to believe that the area will

be developed in the near future. This believe is also based on existing and past development surrounding this area.

Wilderness designation would theoretically not allow oil and gas development on those lands (4,668 acres) within the WSA that have no valid existing rights. This is because this type of development (usually four wells per section, plus roads and pipelines) would destroy wilderness characteristics.

Based on a per acre estimate of the natural gas reserves in this region, as much as 1.4 billion cubic feet of natural gas would be denied development under the All Wilderness Alternative. (This is felt to be an optimum estimate of the gas potential and should not be used as an indicator of actual reserves.)

Wilderness designation would not have any impact on the 5,264 acres that have valid existing development rights. Adverse impacts may occur, however, to the 4,668 acres which do not have valid existing rights.

Forestry

Wilderness designation would prohibit any commercial forest product harvest. Any potential opportunity for forest/woodland management would be lost; however, when compared to the availability of wood products elsewhere in the resource area, this impact is not significant.

Wildlife

Wilderness designation would do little to protect wildlife habitat in Black Mountain. Designation would preclude anticipated oil and gas development on approximately 47 percent of the unit. These are the lands without valid existing mineral

rights. The effect of this limitation on wildlife would be marginal though, because the lands where mineral development would be allowed, are scattered around the unit in such a fashion that allowable development would disturb the wildlife on the remaining lands. Still, wildlife would benefit slightly under this alternative but the beneficial impacts would not be significant.

Visual

If designated, Black Mountain would be managed under Class I VRM guidelines. However, this would not be significant as the area has only minimal scenic quality land with a low sensitivity rating, which means most of it cannot be seen from any major transportation route. In addition 53 percent of the WSA could still be developed under valid existing mineral rights under this alternative; adverse impacts that wilderness designation would not prevent.

Recreation

This area receives little recreational use and designation as wilderness is not anticipated to significantly increase visitor use. Therefore, the recreation resource would not be significantly impacted under this alternative.

Lands and Access

The main access route is by Rio Blanco County Road #142 (Black's Gulch) and BLM Road #1711B, to the north of the unit. Wilderness designation would not affect real estate values or access routes since mineral development under valid existing rights would occur regardless of designation.

Social

Because of pre-existing energy development leases, designation of Black Mountain as wilderness would still provide minor social impacts on Meeker due to conflicts between transient oil and gas workers and permanent residents.

Economics

Based on the estimated gas reserves that could be denied development (1.4 billion cubic feet) with a production value of \$2.60/1000 cubic feet of gas, a possible \$3.2 million in production dollars could be denied to the economy under the All Wilderness alternative. However, 1.6 billion cubic feet of gas, worth approximately \$4.1 million in production dollars, could still be produced on pre-FLPMA leases.

Wilderness

Wilderness designation would provide some degree of protection to the wilderness characteristics in Black Mountain, but not the majority due to the expected oil and gas development on valid existing mineral rights leases. Wilderness designation could only preclude mineral development/disturbance on those lands without valid existing development rights, or 47 percent in the Black Mountain WSA.

If even a few of the leases with these rights are developed in the study area, its overall characteristics of naturalness and opportunities for solitude would be degraded to the point where the area no longer qualifies as wilderness. Assuming that energy development is likely for this area, wilderness designation would have

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

little effect toward the protection of these characteristics and would not have an overall beneficial impact on wilderness values.

Windy Gulch

Minerals

The Windy Gulch study area has approximately 8,900 acres or 73 percent of the WSA covered by valid existing development rights and 27 percent of the area covered by post-FLPMA leases. Based on a per acre estimate of the natural gas reserves in this region, as much as 2.7 billion cubic feet of natural gas could still be developed. It has been estimated that up to 1.0 billion cubic feet of natural gas would not be developed under the All Wilderness alternative. Because of the existence of the pre-FLPMA leases, no significant adverse impact to development of the mineral resource is anticipated to occur under this alternative.

Forestry

Wilderness designation would prohibit any commercial forest product harvest. Any potential opportunity for forest/woodland management would be lost; however, when compared to the availability of wood products elsewhere in the resource area, this impact is not significant.

Wildlife

Wilderness designation and management would do little to protect wildlife habitat in Windy Gulch. Designation would preclude anticipated oil and gas develop-

ment on only approximately 27 percent of the unit. These are the lands without valid existing mineral rights. The effect of this limitation on wildlife would be marginal, though, because the lands where mineral development would be allowed, are scattered around the unit in such a fashion that allowable development would disturb the wildlife on the remaining lands. Still, wildlife would benefit slightly under this alternative but the beneficial impacts would not be significant.

Visual

If designated, Windy Gulch would be managed under Class I VRM guidelines. However, this would not be significant as the area has only minimal scenic quality land with a low sensitivity rating, which means most of it can not be seen from any major transportation route. Seventy-three percent of the WSA could still be developed under valid existing mineral rights under this alternative; adverse impacts that wilderness designation would not prevent.

Recreation

This area receives little recreational use and designation as wilderness is not anticipated to significantly increase visitor use. Therefore, the recreation resource would not be significantly impacted under this alternative.

Lands and Access

No impacts are expected to occur to either real estate values or access routes under this alternative. Mineral development, which could affect these resources, would occur regardless of designation due to valid existing development rights which cover 73 percent of the WSA.

Social

No significant social impacts would occur under this alternative.

Economics

This alternative could prevent development of 1.0 billion cubic feet of natural gas. With a production value of \$2.60/1000 cubic feet of gas, a possible \$2.7 million in production dollars could be denied to the economy. However, \$7 million could still be produced on valid existing rights, therefore no significant adverse impact will occur.

Wilderness

Wilderness designation could provide some degree of protection to the wilderness characteristics in Windy Gulch area, but not the majority due to the expected oil and gas development on valid existing mineral rights leases. Wilderness designation could only preclude mineral development/disturbance on those lands without valid existing development rights, or 27 percent in the Windy Gulch WSA.

If even a few of the leases with these rights are developed in the study area, its overall characteristics of naturalness and opportunities for solitude would be degraded to the point where the area no longer qualifies as wilderness. Assuming that energy development is likely for this area, wilderness designation would have little effect toward the protection of these characteristics and would not have a beneficial impact on wilderness values.

Oil Spring Mountain

Minerals

The Oil Spring Mountain study area has at least 12,241 acres or 69 percent of the WSA covered by valid existing development rights and 31 percent covered by post-FLPMA leases. Based on a per acre estimate of the natural gas reserves in this region, as much as 3.7 billion cubic feet of natural gas could still be developed. It has been estimated that up to 1.7 billion cubic feet of natural gas would not be developed under the All Wilderness alternative.

Forestry

Wilderness designation would prohibit any commercial forest product harvest. Any potential opportunity for forest/woodland management would be lost; however, when compared to the availability of wood products elsewhere in the resource area, this impact is not significant.

Wildlife

Wilderness designation and management would do little to protect wildlife habitat in Oil Spring Mountain. Designation would preclude anticipated oil and gas development on approximately 31 percent of the unit. These are the lands without valid existing mineral rights. The effect of this limitation on wildlife would be marginal though, because the lands where mineral development would be allowed, are scattered around the unit in such a fashion that allowable development

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

would disturb the wildlife on the remaining lands. Still, wildlife would benefit slightly under this alternative but the beneficial impacts would not be significant.

Visual

If designated, Oil Spring Mountain would be managed under Class I VRM guidelines. However, this would not be significant as the area has only minimal scenic quality land with a low sensitivity rating, which means most of it cannot be seen from any major transportation route. Since 69 percent of the WSA could still be developed under valid existing mineral rights under this alternative, adverse impacts would occur despite wilderness designation.

Recreation

This area receives little recreational use and designation as wilderness is not anticipated to significantly increase visitor use. Therefore, the recreation resource would not be significantly impacted under this alternative.

Lands and Access

Wilderness designation would not affect real estate values or access routes since mineral development under valid existing rights would occur regardless of designation.

Social

No significant social impacts would occur under this alternative.

Economics

This alternative could prevent development of 1.7 billion cubic feet of natural gas. With a production value of \$2.60/1000 cubic feet of gas, a possible \$2.7 million in production dollars could be denied to the economy. However, \$7 million could still be produced on valid existing rights, therefore no significant adverse impact will occur.

Wilderness

Wilderness designation would provide some degree of protection to the wilderness characteristics in Oil Spring Mountain area, but not the majority due to the expected oil and gas development on valid existing mineral rights leases. Wilderness designation could only preclude mineral development/disturbance on those lands without valid existing development rights, or 31 percent in the Oil Spring Mountain WSA.

If even a few of the leases with these rights are developed in the study area, its overall characteristics of naturalness and opportunities for solitude would be degraded to the point where the area no longer qualifies as wilderness. Assuming that energy development is likely for this area, wilderness designation would have little effect toward the protection of these characteristics and would not have an overall beneficial impact on wilderness values.

NO WILDERNESS (NO ACTION) ALTERNATIVE

Bull Canyon

Minerals

Current management allows for full mineral

NO WILDERNESS (NO ACTION) ALTERNATIVE

development within standard environmental constraints, should the lease holders so desire. As stated previously however, the potential for economic recovery is low, so little mineral development is anticipated in this WSA.

Forestry

Implementing this alternative would permit the commercial sale of forest products as planned within the WSA, and in the future should an opportunity become available. A 200 to 300 acre tract identified as a potential commercial fencepost sale area could be developed. This would aid in meeting public demand for forest products and would constitute a beneficial impact.

Wildlife

Wildlife habitat would probably remain undisturbed even under the No Wilderness alternative since no development is anticipated in this area. The major difference between the No Wilderness and Wilderness alternatives is that the Wilderness alternative could provide management protection from unforeseen development.

Visual

With no development planned or anticipated in the study area in the foreseeable future, the visual quality would probably remain undisturbed with existing management.

Recreation

With no recreational or other developments planned or anticipated, and little public knowledge of the area, recreational use

will continue to be insignificant under current management.

Lands and Access

No significant impacts are anticipated to real estate values or access routes if the area is managed under the existing land use plan for multiple-resource values.

Social

No significant social impacts would occur with nondesignation of this WSA.

Economics

No impacts are anticipated under this alternative since current land uses would continue.

Wilderness

With no development planned or anticipated in this area in the foreseeable future, the wilderness characteristics would probably remain undisturbed under current management. However, if development is proposed in the future, it would take priority over the protection of wilderness characteristics with this alternative.

Existing management would only protect, or manage some of the wilderness characteristics, not all. It would not necessarily protect the opportunities for solitude, primitive recreation or the overall naturalness. Protection of these characteristics is the prime reason for the establishment of the National Wilderness Preservation System.

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Willow Creek

Minerals

Current management allows for full mineral development within standard environmental constraints, should the lease holders so desire. As stated previously however, the potential for economic recovery is low, so no mineral development is anticipated in this WSA.

Forestry

Implementing this alternative would permit the commercial sale of forest products. Since the potential is low, impacts would be minimal.

Wildlife

Wildlife habitat would probably remain undisturbed even under the No Wilderness alternative since no development is anticipated in this area. The major difference between the No Wilderness and Wilderness alternatives is that the Wilderness alternative could provide management protection from unforeseen development.

Visual

With no development planned or anticipated in the study area in the foreseeable future, the visual quality would probably remain undisturbed with existing management.

Recreation

With no recreational or other developments planned or anticipated, and little public knowledge of the area, recreational use will continue to be insignificant under current management.

Lands and Access

The main access to Willow Creek is directly off the Dinosaur National Monument Road, on the western part of the unit. No significant impacts are anticipated to real estate values or access routes if the area is managed under the existing land use plan for multiple-resource values.

Social

No significant social impacts would occur with nondesignation of this WSA.

Economics

No impacts are anticipated under this alternative since current land uses would continue.

Wilderness

With no development planned or anticipated in this area in the foreseeable future, the wilderness characteristics would probably remain undisturbed under current management. However, if development is proposed in the future, it would take priority over the protection of wilderness characteristics with this alternative.

NO WILDERNESS (NO ACTION) ALTERNATIVE

Existing management would only protect, or manage some of the wilderness characteristics, not all. It would not necessarily protect the opportunities for solitude or primitive recreation or the overall naturalness. Protection of these characteristics is the prime reason for the establishment of the National Wilderness Preservation System.

Skull Creek

Minerals

Current management allows for full mineral development within standard environmental constraints, should the lease holders so desire. As stated previously however, the potential for economic recovery is low, so no mineral development is anticipated in this WSA.

Forestry

Implementing this alternative would permit the commercial sale of forest products. The potential is low, so impacts, either beneficial or adverse would be minimal.

Wildlife

Wildlife habitat would probably remain undisturbed even under the No Wilderness alternative since no development is anticipated in this area. The major difference between the No Wilderness and Wilderness alternatives is that the Wilderness alternative could provide management protection from unforeseen development.

Visual

With no development planned or anticipated in the study area in the foreseeable future, the visual quality would probably remain undisturbed with existing management.

Recreation

With no recreational, or other developments planned or anticipated, and little public knowledge of the area, recreational use will continue to be insignificant under current management.

Lands and Access

The alternative would not have a significant effect upon the lands and access. The main access to Skull Creek is County Road #95 off of U.S. 40, by the community of Skull Creek. It should be pointed out that local residents are apprehensive about the general public using this access route "through" their private lands, but the road does allow legal access.

Social

No significant social impacts would occur with nondesignation of this WSA.

Economics

No significant impacts are anticipated under this alternative since current land uses would continue.

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Wilderness

With no development planned or anticipated in this area in the foreseeable future, the wilderness characteristics would probably remain undisturbed under current management. However, if development is proposed in the future, it would take priority over the protection of wilderness characteristics with this alternative.

Existing management would only protect, or manage some of the wilderness characteristics, not all. It would not necessarily protect the opportunities for solitude or primitive recreation or the overall naturalness. Protection of these characteristics is the prime reason for the establishment of the National Wilderness Preservation System.

Black Mountain

Minerals

Existing management plans would allow for full development of the Black Mountain study area with standard environmental protections. Maximum mineral development could conceivably produce approximately 3.0 billion cubic feet of natural gas within the Black Mountain WSA, based on estimated averages in the general region. Nondesignation would allow mineral activity to continue under existing management and this alternative would beneficially impact the mineral resource.

Forestry

Implementing this alternative would permit the commercial sale of forest products

should an opportunity become available. This would be a beneficial impact to the resource.

Wildlife

Current management allows for full development of the mineral resources on these lands. Preliminary estimates of the oil and gas (mostly natural gas) reserves under Black Mountain are high. With 53 percent of the area covered with valid existing development rights, in combination with the high reserve potential, the chances of development are high. Consequently, the impacts to wildlife would be greater with this alternative. For example, the disturbance to mule deer winter range is estimated to be approximately 47 percent more under this alternative than the All Wilderness alternative. This could adversely affect 213 more animals than the All Wilderness alternative (see Table 4-1); however, when compared with regional wildlife populations, this would not be a significant impact.

Visual

The visual quality of the area would be reduced significantly by the expected oil and gas development. The construction of drilling pads, roads, pipelines and powerlines would all be in great contrast to the natural qualities that presently exist. A significant adverse impact is expected to occur.

Recreation

Current management would allow for full energy development, under normal environmental constraints which would destroy deer habitat and displace these game

TABLE 4-1
SUMMATION OF MAXIMUM POTENTIAL POPULATION DECLINES
FOR MULE DEER AND ELK BY ALTERNATIVE

WSA Unit	Seasonal Wildlife Use	Potential Population Decline by Alternative	
		All Wilderness	No Wilderness
Black Mountain	Mule Deer Critical Winter Range	79	134
	Mule Deer Winter Range	173	342
	Elk Overall Distribution	3	11
Windy Gulch	Mule Deer Summer Range	35	58
	Mule Deer Winter Range	268	344
	Elk Overall Distribution	30	36
Oil Spring Mountain	Mule Deer Summer Range	47	72
	Mule Deer Winter Range	37	53
	Elk Overall Distribution	12	15
	Elk Concentration Area	4	4

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animals. Therefore, the small amount of deer and elk hunting that takes place here would be reduced significantly during the life of the anticipated oil and gas projects. This would constitute an adverse impact in the short term.

Lands and Access

No significant impacts are anticipated to real estate values or access routes if the area is managed under the existing land use plan for multiple-resource values. The main access route is by Rio Blanco County Road #142 (Black's Gulch) and BLM Road #1711B, to the north of the unit.

Social

No significant social structural shifts would occur in Meeker from an increase in numbers of temporary and transient oil and gas workers. However, minor social conflicts between these and the more permanent residents of the community would probably take place.

Economics

Full oil and gas development of Black Mountain could be achieved under this alternative. The estimated potential of the natural gas reserves include approximately three billion cubic feet of gas, worth approximately \$7.8 million.

Five measures of economic effects are: 1) employment, 2) population, 3) work force, 4) income, and 5) revenues and expenditures of state and local governments. Because the oil and gas industry is well established in the region, economic effects of 1 through 4 would be only a slight addition to existing businesses.

There would be no significant increases in these effects from development of less than seven percent of the land estimated to have moderate to high oil and gas potential in the resource area. This development would represent an even lower percentage of the entire oil and gas region that affects Rio Blanco County and Rangely, Colorado residents.

Some rough estimates of state and local government revenues have been determined. Until the production phase begins, the only payments made to state and local governments will be increased tax revenues generated by the increased economic activity in the region. Oil and gas activities already account for as much as 80 percent of the assessed value of Rio Blanco County. Once any oil and gas starts flowing, payments would be made to the state in the form of royalties on each barrel of oil, or million cubic foot of gas. Currently, total royalties paid to the state are between 12 and 14 percent of the well price of oil and gas.

Presently, oil and gas royalties contribute from one to ten percent of the county budgets in Colorado. The state divides the royalties up among the counties in varying amounts, depending on needs and circumstances.

Another source of revenue to counties is a share received from Federal mineral lease annual rental fees. The amount received by the counties would be less than one cent per acre per year, so the total amount received would be an insignificant portion of any county's budget.

Under this alternative, nondesignation of wilderness would permit mineral activity to proceed at its maximum desired rate of development. This would be a beneficial impact on the economic resource as revenue to the state would increase.

NO WILDERNESS (NO ACTION) ALTERNATIVE

Wilderness

Under the No Wilderness alternative, the Black Mountain WSA could undergo a high rate of mineral development. This development would degrade the wilderness characteristics to the point where they no longer exist. A significant adverse impact to wilderness characteristics would occur under this alternative.

Windy Gulch

Minerals

Existing management plans would allow for full development of the Windy Gulch area with standard environmental protections. Maximum mineral development could conceivably produce approximately 3.7 billion cubic feet of natural gas within the Windy Gulch WSA, based on estimated averages in the general region. Nondesignation would allow mineral activity to continue under existing management and this alternative would beneficially impact the resource.

Forestry

Implementing this alternative would permit the commercial sale of forest products should an opportunity become available. This would beneficially impact the resource.

Wildlife

Current management allows for full development of the mineral resources on these lands. Preliminary estimates of the oil and gas (mostly natural gas) reserves on

the Windy Gulch WSA are high. With 73 percent of the area covered with valid existing development rights, in combination with the high reserve potential, the chances of development are high. Consequently, the impacts to wildlife would be greater with this alternative. For example, the disturbance to mule deer winter range is estimated to be approximately 47 percent more under this alternative than the All Wilderness alternative. This could adversely affect 99 more animals than the All Wilderness alternative (see Table 4-1).

Visual

The visual quality of the areas would be reduced significantly by the expected oil and gas development. The construction of drilling pads, roads, pipelines and powerlines would all be in great contrast to the natural qualities that presently exist. A significant adverse impact is expected to occur.

Recreation

Current management would allow for full energy development, under normal environmental constraints which would destroy deer habitat and displace these game animals. Therefore, the small amount of deer and elk hunting that takes place here would be reduced significantly during the life of the anticipated oil and gas projects. This would constitute an adverse impact in the short term.

Lands and Access

No significant impacts are anticipated to real estate values or access routes if the area is managed under the existing land use plan for multiple-resource values.

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Social

No significant social structural shifts would occur in Meeker from an increase in numbers of temporary and transient oil and gas workers. However, minor social conflicts between these and the more permanent residents of the community would probably take place.

Economics

Full oil and gas development could be achieved under this alternative. The total potential of the natural gas reserves are estimated to be approximately \$9.7 million. This is a beneficial impact due to the increased revenue which would be generated.

Local impacts would be similar to those discussed under Black Mountain for this alternative.

Wilderness

Under the No Wilderness alternative, the Windy Gulch WSA could undergo a high rate of mineral development. This development would degrade the wilderness characteristics to the point where they no longer exist. Thus, this alternative represents a significant adverse impact to wilderness characteristics.

Oil Spring Mountain

Minerals

Existing management plans would allow for full development of the Oil Spring

Mountain area with standard environmental protections. Maximum mineral development could conceivably produce approximately 5.4 billion cubic feet of natural gas within the Oil Spring Mountain WSA, based on estimated averages in the general region. Nondesignation would allow mineral activity to continue under existing management and this alternative would beneficially impact the resource.

Forestry

Implementing this alternative would permit the commercial sale of forest products should an opportunity become available. This would be a beneficial impact to the resource.

Wildlife

Current management allows for full development of the mineral resources on these lands. Preliminary estimates of the oil and gas (mostly natural gas) reserves under Oil Spring Mountain are high. With 69 percent of the area covered with valid existing development rights, in combination with the high reserve potential, the chances of development are high. Consequently, the impacts to wildlife would be greater with this alternative. For example, the disturbance to mule deer winter range is estimated to be approximately 31 percent more under this alternative than the All Wilderness alternative. This could adversely affect 41 more animals than the All Wilderness alternative (see Table 4-1). Insufficient data is available concerning mountain lion and black bear to make an estimate of decline.

BOUNDARY ADJUSTMENT ALTERNATIVE

Visual

The visual quality of the area would be reduced significantly by the expected oil and gas development. The construction of drilling pads, roads, pipelines and powerlines would all be in great contrast to the natural qualities that presently exist. A significant adverse impact is expected to occur.

Recreation

Current management would allow for full energy development, under normal environmental constraints, which would destroy deer habitat and displace these game animals. Therefore, the small amount of deer and elk hunting that takes place here would be reduced significantly during the life of the anticipated oil and gas projects. This would constitute an adverse impact in the short term.

Lands and Access

No significant impacts are anticipated to real estate values or access routes if the area is managed under the existing land use plan for multiple-resource values.

Social

No significant social structural shifts would occur in Rangely from this alternative. However, minor social conflicts between transient oil and gas workers and permanent residents could take place, and the present over-crowding caused by the new Western Fuels coal mine and the Desert Generating plant would be made worse. Even small population impacts would have adverse consequences for the next several years.

Economics

Full oil and gas development could be achieved under this alternative. The total potential of the natural gas reserves are estimated to be approximately \$14 million.

Impacts to Rangely would be moderately significant. As many as 50 additional jobs would be created, resulting in a population growth of up to 200. The new jobs would increase wage and salary incomes by about \$1,000,000 and would raise Rangely's tax revenues by some \$25,000. Because the town has already prepared for growth, requirements for additional capital improvements should be small.

Wilderness

Under the No Wilderness alternative, the Oil Spring Mountain WSA could undergo a high rate of mineral development. This development would degrade the wilderness characteristics to the point where they no longer exist. Thus, this alternative represents a significant adverse impact to wilderness characteristics.

BOUNDARY ADJUSTMENT (PARTIAL WILDERNESS) ALTERNATIVE

Bull Canyon

Minerals

According to preliminary geologic reports the potential for discovery of oil or gas, or other minerals in economic quantities

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

is low. Energy developers were asked to respond to a survey regarding interest in development of this area. Low to moderate interest to develop was expressed.

A major emphasis has been placed on oil and gas leases with valid and existing rights (pre-FLPMA) within these WSAs. In a recent court decision (Rocky Mountain Oil and Gas Association vs. Andrus, Civ. Re. 78-265, D. Wyo., 1980) it was held that mineral leases issued prior to the passage of the Federal Land Policy and Management Act of 1976 (FLPMA) are not subject to the nonimpairment standards of Section 603(c) of that act. Therefore, pre-FLPMA mineral leases are considered valid existing rights, allowing development regardless of wilderness designation.

It should be noted that the entire study area is covered with oil and gas leases and of these, 42 percent, or 5,220 acres are leases with valid existing development rights, which could be developed regardless of wilderness designation and 58 percent is covered by post-FLPMA leases with no rights. The existence of these leases does not indicate future development, by any means. These leases are often purchased merely for speculation.

The probability of wilderness designation adversely impacting future mineral development is low, because firstly, the potential for reserves is low, and secondly, 42 percent of the area can still be developed under valid existing rights.

Forestry

Wilderness designation would prohibit commercial forest product harvest. Therefore any potential opportunity for forest/woodland management would be lost. A tract of approximately 200-300 acres in the central portion of the WSA has been identified as a potential commercial fencepost

sale area. Since commercial cutting is not a "grandfathered" activity it would not be permitted under this alternative. However, when compared to the availability of wood products elsewhere in the Resource Area, this impact is not significant.

Wildlife

The wildlife resource would benefit to a small degree from designation of this unit as a wilderness area. Wilderness management regulations would minimize the major adverse impacts of human encroachment from increased vehicular access, and destruction of habitats associated with oil and gas exploration and development should it occur in this area of low development potential. These regulations would contribute to maintenance of quality habitat and ensure long term optional use of this area by wildlife.

Visitor use would increase under wilderness designation. However, this encroachment would occur mainly during the summer months and impacts to the wintering deer herd are not expected. The steeply dissected terrain would limit visitor use around the raptor nesting areas therefore only minimal impacts are expected.

Visual

With wilderness designation, the Bull Canyon Scenic Area would be managed under Class I Visual Resource Management (VRM) guidelines, which is the maximum protection afforded scenic areas that have been designated as either wilderness or natural areas. This action would ensure protection of the area's scenic quality and the viewing opportunities from both the Escalante and Plug Hat Scenic Overlooks, located along the Dinosaur National Monument access road.

Recreation

The study area receives little recreational use and only by those that enjoy high desert lands environment. Therefore, it is assumed that wilderness designation will only attract those same types of users so the numbers would remain relatively small.

Lands and Access

Three hundred twenty acres of land near the center of the Bull Canyon unit are privately owned and are used as part of a private cattle grazing operation. This tract is undeveloped and indistinguishable from the public lands. Under this alternative, the landowner could continue this grazing operation and would not be subject to access restrictions. Wilderness designation would adversely impact the value of the 320 acres if development was the intention. Conversely, land values could be beneficially impacted if buyers were interested in wilderness uses.

Social

No significant social impacts would occur with designation of this WSA as wilderness.

Economics

Wilderness designation would not preclude any existing, planned, or anticipated uses of the land within or near this study area. The current uses of livestock grazing and hunting would continue.

Some of the businesses in nearby Dinosaur, Colorado may stand to receive some

increased retail trade from the increase in wilderness visitors. The estimated effects upon the economies of either Dinosaur or Moffat County would be insignificant.

Wilderness

Bull Canyon's wilderness characteristics, which include naturalness and outstanding opportunities for solitude and primitive recreation, would be protected under the authority of the 1964 Wilderness Act and BLM's Wilderness Management Policy, if designated as wilderness. Under this alternative, adjusting the boundaries to follow recognizable topographic features would make the study area easier to identify by the public. By making the boundaries easier to locate on the ground, inadvertent intrusions which would not be compatible with wilderness characteristics would be less likely to occur. These modified boundaries would enhance manageability of the WSA and protect wilderness characteristics.

Adding Bull Canyon to the National Wilderness Preservation System would constitute a beneficial impact because of the diversity that area would add to the system.

Other WSAs

The Willow Creek, Skull Creek, Black Mountain, Windy Gulch and Oil Spring Mountain WSAs were assessed to see if boundary adjustments would enhance manageability or aid in the resolution of conflicts. No appropriate adjustments were identified (see Chapter I - Alternatives Considered But Eliminated). Therefore, this alternative was not analyzed for these five WSAs.

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

MITIGATION MEASURES

The impacts resulting from the alternatives analyzed in this document are a consequence of various types of proposed management and not a direct result of specific proposed actions.

Mitigation will be included in site specific environmental assessments which will be required in the future. Therefore, no mitigating measures will be discussed here.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Under the All Wilderness or Boundary Adjustment alternatives, the revenue which could be generated from development of post-FLPMA leases would be lost. This would have an unavoidable adverse effect on State and local economies. Wilderness characteristics of the Black Mountain, Windy Gulch, and Oil Spring Mountain WSAs, which are lost under the No Wilderness alternative due to impacts from energy development, would result in unavoidable adverse effects. See Chapter II - Table 2-1 for a discussion of minor adverse impacts.

SHORT TERM USE vs LONG TERM PRODUCTIVITY

All Wilderness and Boundary Adjustment (Partial Wilderness) Alternatives. Under these alternatives, there would be a loss of revenue which could be generated by maximum energy development and the sale of forest products in the short term. Wilderness characteristics would be protected in the long term.

No Wilderness (No Action) Alternative. Under this alternative, wilderness characteristics would be degraded in both the short and long term. Mineral and forest product development would grow in the long term.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENTS OF RESOURCES

There would be an irretrievable loss of wilderness characteristics under the No Wilderness alternative. Revenue from mineral development on post-FLPMA leases under the All Wilderness alternative would be irretrievably lost. Threatened and endangered species and subsurface cultural or historic sites overlooked in original surveys could be damaged, depleted, or destroyed and would represent an irretrievable loss under all alternatives.

CONFLICTS WITH FEDERAL, STATE AND LOCAL LAND USE PLANS

No conflicts with any federal, regional, state or local land use plans have been identified, as a result of any of the alternatives.

ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Implementation of any alternative would require motor vehicle and aircraft fuel for administration of the area. However, the amount would not be different for any alternative selected, and no conservation potentials are evident.

CHAPTER V

CONSULTATION AND COORDINATION

CHAPTER V

CONSULTATION AND COORDINATION

REGULATORY MEASURES

The first measure is the establishment of a regulatory body. This body will be responsible for the implementation of the regulatory measures. It will also be responsible for the monitoring and evaluation of the regulatory measures.

The second measure is the establishment of a regulatory framework. This framework will be based on the principles of transparency, accountability, and efficiency. It will also be based on the principles of participation and consultation.

ADVANCEMENT OF THE ENVIRONMENT

The first measure is the establishment of a regulatory body. This body will be responsible for the implementation of the regulatory measures. It will also be responsible for the monitoring and evaluation of the regulatory measures.

ENVIRONMENTAL IMPACT ASSESSMENT

The first measure is the establishment of a regulatory body. This body will be responsible for the implementation of the regulatory measures. It will also be responsible for the monitoring and evaluation of the regulatory measures.

The first measure is the establishment of a regulatory body. This body will be responsible for the implementation of the regulatory measures. It will also be responsible for the monitoring and evaluation of the regulatory measures.

Item	Value
1	100
2	200
3	300
4	400
5	500
6	600
7	700
8	800
9	900
10	1000

The first measure is the establishment of a regulatory body. This body will be responsible for the implementation of the regulatory measures. It will also be responsible for the monitoring and evaluation of the regulatory measures.

ENVIRONMENTAL IMPACT ASSESSMENT

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CHAPTER V

CONSULTATION AND COORDINATION

A. Coordination with Other Federal Agencies, State, and Local Government

Formal coordination with other governmental agencies has taken place at two points in the wilderness planning process. The Colorado State Clearinghouse, individual state agencies, Rio Blanco and Moffat Counties, and local and regional offices of affected Federal agencies were contacted at the outset of the process to involve them in scoping and issue identification. The primary purpose of this involvement was to assure that all levels of government were given the opportunity to identify their concerns, and give early public notice of potential impacts to non-Federal lands.

The second level of coordination was an effort to determine consistency with local and state resource-related plans. Letters were sent to the Board of County Commissioners of Moffat and Rio Blanco Counties, and to the State of Colorado, requesting an official statement on those plans, policies, and programs with which this amendment should be consistent. The consistency provision and the results of this coordination effort are discussed below.

B. Consistency Requirements

The Federal Land Policy and Management Act requires that the MFP Amendment be as

consistent as possible with existing officially adopted and approved resource-related policies, plans or programs of other Federal agencies, State agencies, and local governments that may be affected. There are no officially approved resource-related plans of State, local or other Federal agencies that would conflict with designation of any of the WSAs as wilderness. Designation is, therefore, consistent with these plans, and the areas should be considered suitable for designation as wilderness.

C. Public Participation

The public participation process for this amendment began with the publication of a notice in the Federal Register on February 6, 1981, a news release mailed February 5, 1981, and a mailing to the Craig District mailing list on February 10, 1981. All of these announced the beginning of the amendment process, public meetings, and invited comment. The meetings were held February 26 through March 5, 1981, in Rangely, Denver, Grand Junction, and Meeker, Colorado. Comments were received and grouped into issues. A summary of the planning criteria was sent to the 1,700 people on the Craig District mailing list on May 29, 1981. A notice of availability of the draft and final amendments will be published in the Federal Register.

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The following are definitions for terms commonly used in the BLM wilderness study process:

Areas of Critical Environmental Concern (ACEC): Areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

FLPMA: The Federal Land Policy and Management Act of 1976 (Public Law 94-579, 90 Stat. 2743, 43 USC 1701).

Impact: The effect, influence, alteration, or imprint of an activity.

Impair: To diminish in value or excellence.

Management Framework Plan (MFP): The Bureau's basic land use plan prior to 1979, after which land use plans are called a Resource Management Plan (RMP).

MFP Amendment: An amendment to a Management Framework Plan is initiated by the need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances, or an applicant's proposed action which may result in a significant change in a portion of the approved plan.

Multiple Resource Values and Uses: The present and potential uses of the various resources administered through multiple use management on the public lands and any public values associated with such uses.

Multiple Use: ". . . the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American

people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some lands for less than all of the resources; a combination of balanced and diverse resource uses that take into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output" (From Section 103, FLPMA).

Naturalness: Refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable" (From Section 2(c), Wilderness Act).

Outstanding: 1. Standing out among others of its kind; conspicuous; prominent. 2. Superior to others of its kind; distinguished; excellent.

Planning Area: The area for which resource management plans are prepared and maintained. In most instances, it is the same as the resource area, which is a geographic portion of a BLM district, under supervision of an area manager.

Planning Criteria: The factors used to guide development of the resource management plan, or revision, to ensure that it is tailored to the issue previously identified and to ensure that unnecessary data collection and analyses

GLOSSARY

are avoided. Planning criteria are developed to guide the collection and use of inventory data and information, the analysis of the management situation, the design and formulation of alternatives, the estimation of the effects of alternatives, the evaluation of alternatives, and the selection of the preferred alternative.

Population Center: A Standard Metropolitan Statistical Area (SMSA) which has a population of 100,000 or greater. An SMSA is a county which contains at least one city of 50,000 inhabitants or more plus as many adjacent counties as are metropolitan in character and are socially integrated with that central city or cities.

Pre-FLPMA: Before October 21, 1976, the date of approval of the Federal Land Policy and Management Act.

Preliminary Wilderness Recommendation: Refers to a wilderness recommendation at any stage prior to the time when the Secretary of the Interior reports his recommendation to the President. Until the Secretary acts, the recommendation is "preliminary" because it is subject to change during administrative review.

Primitive and Unconfined Recreation: Nonmotorized and nondeveloped types of outdoor recreational activities.

Region: A homogeneous geographical area generally larger than the planning area under study, whose boundaries are determined through the EIS scoping process and the identification of issues. Its boundaries should encompass 1) all lands that would be affected by the land use allocations proposed for the planning area, and 2) all lands which have an effect on the activities occurring in the planning area.

Resource Management Plan (RMP): The basic decision document of BLM's resource man-

agement planning process, used to establish allocation and coordination among uses for the various resources within a Resource Area. An RMP is a "land-use plan" prescribed by Section 202 of the Federal Land Policy and Management Act. RMP regulations appear at 43 CFR 1601 (refer to definition of Management Framework Plan).

SMSA: Standard Metropolitan Statistical Area - See definition under "Population Center."

Solitude: 1. The state of being alone or remote from habitations; isolation. 2. A lonely, unfrequented, or secluded place.

Suitability: As used in the Wilderness Act and in the Federal Land Policy and Management Act, refers to a recommendation by the Secretary of the Interior or the Secretary of Agriculture that certain Federal lands satisfy the definition of wilderness in the Wilderness Act and have been found appropriate for designation as wilderness on the basis of an analysis of the existing and potential uses of the land.

Substantially Unnoticeable: Refers to something that either is so insignificant as to be only a very minor feature of the overall area or is not distinctly recognizable by the average visitor as being manmade or man-caused because of age, weathering or biological change. An example of the first would be a few minor dams or abandoned mine buildings that are widely scattered over a large area, so that they are an inconspicuous part of the scene. Serious intrusions of this kind, or many of them, may preclude inclusion of the land in a wilderness study area. An example of the second would be an old juniper control project that has grown up to a natural appearance, the old fallen trees largely decomposed.

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Wilderness: The definition contained in Section 2(c) of the Wilderness Act of 1964 (78 Stat. 891).

Wilderness Area: An area formally designated by Act of Congress as part of the National Wilderness Preservation System.

Wilderness Characteristics: The definition contained in Section 2(c) of the Wilderness Act of 1964 (78 Stat. 891) (see Appendix B for its full text).

Wilderness Inventory: An evaluation of the public lands in the form of a written description and map showing those lands that meet the wilderness criteria as established under Section 603(a) of FLPMA and Section 2(c) of the Wilderness Act, which will be referred to as Wilderness Study Areas (WSA).

Wilderness Management: The management of human use and influence on lands which have been designated by Act of Congress as wilderness areas.

Wilderness Program: Term used to describe all wilderness activities of the Bureau of Land Management including identification, management, and administrative functions.

Wilderness Suitability Recommendations: A recommendation by the Bureau of Land Man-

agement, the Secretary of the Interior, or the President, with respect to an area's suitability or nonsuitability for preservation as wilderness.

Wilderness Reporting: The process of preparing the reports containing wilderness recommendations on wilderness study areas and transmitting those reports to the Secretary of the Interior, the President, and Congress.

Wilderness Review: The term used to cover the entire wilderness inventory, study, and reporting phases of the wilderness program of the Bureau of Land Management.

Wilderness Study Area (WSA): A roadless area or island that has been inventoried and found to have wilderness characteristics as described in Section 603 of FLPMA and Section 2(c) of the Wilderness Act of 1964 (78 Stat. 891).

Wilderness Study: The process outlined in these guidelines which specifies how each wilderness study area must be studied through the BLM resource management planning system, analyzing all resources, values and uses within the WSA to determine whether the area will be recommended as suitable or unsuitable for wilderness designation.

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